

# AA

THE WORLD'S BEST BUBBLE BURSTER

# INVASION!

PANG - WHAT THE PRESS SAY. THE ONE 90% "Simplicity is the spice of life - and Pang is a spicy product" "a refreshing blast from your arcade past" "Good, clean fun for all the family."

AMIGA FORMAT - 87% "the game is incredibly difficult to put down" "Simple and enjoyable games like Pang don't come along too often" "the sheer addictiveness will keep you coming back for just a quick couple of hours 'gaming'"

CU - "CU SCREEN STAR" - 87% "Superbly converted with plenty of bounce."

"Pang plays BRILLIANTLY" "Ocean have managed to capture the feel of the Arcade game perfectly - and that's what makes Pang a winner."

ACE - 840 "Just wait till you play it - the game positively oozes addictiveness" "If you hanker for the days when games were fun and simple, buy Pang - you won't regret it!"

ZZAP - 82% "A polished conversion of a playable coin-op."

**ocean**

OUT NOW FOR SPECTRUM AMSTRAD COMMODORE ATARI ST AMIGA

NOT an official publication!

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# A M S T R A D ACTION

# IT'S TOO MUCH!

AA's bumper festive issue is crammed fit to bust!

More CPC reviews than any other mag!

The AA XMAS COVERTAPE

A

- PUZZNIC Ocean's Rave-rated puzzler - a fully-playable demo!
- LOST CAVES A full, special version of Players' brilliant budget epic

B

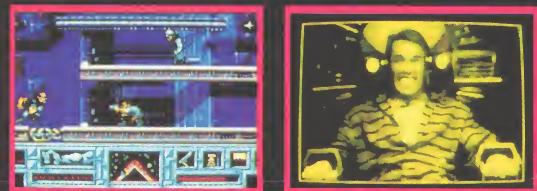
- SPACE FROGGY Complete Sprites Alive game (special offer inside)
- DISK OWNERS! A new routine to transfer all these programs to disk

Full instructions on page 36

What, no cover cassette? Interrogate your newsagent now!

# POWER SURGE

SCHWARZENEGGER  
TOTAL RECALL



As Doug Quaid you have been haunted by recurring dreams of another life on Mars.

You are drawn to Rekall Incorporated, a unique travel service specializing in implanting fantasies into the minds of those who desire to turn their dreams into reality.

#### THE EGO TRIP OF A LIFETIME

Experience the horror as your dreams turn into hideous nightmares. Suddenly your every move is monitored by would-be assassins. You discover the surreal truth -

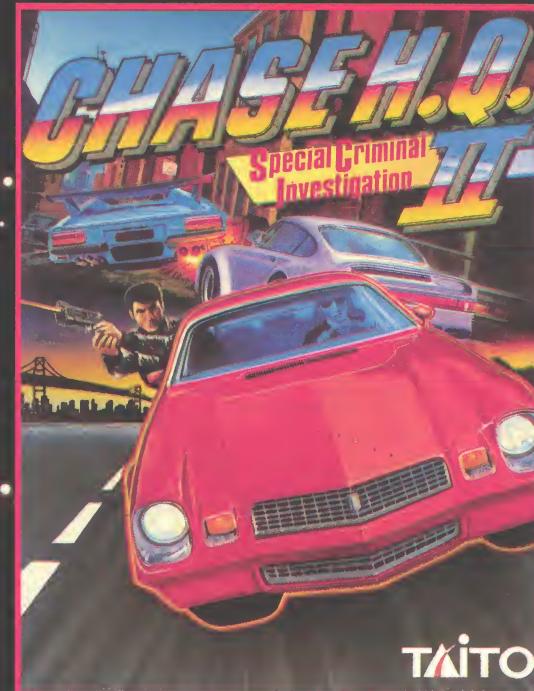
#### YOU'RE NOT YOU - YOU'RE ME

You must travel to Mars to discover your true identity - your mission is now a journey of non-stop action, strange mutants, futuristic vehicles and a startling array of weaponry all captured in superbly executed graphics and a game play that complements the success of the year's top movie.

#### CHASE HQ 2 Special Criminal Investigation

continuing where CHASE HQ left off. The Arcade thriller takes you from the bright lights of Paris to the rugged terrain of the Sahara.

Your mission is to track down, chase and apprehend the dangerous criminals.



TAITO

#### It's FASTER

Explosive power sends you bulleting through various terrains - hold the line or plough the fields!

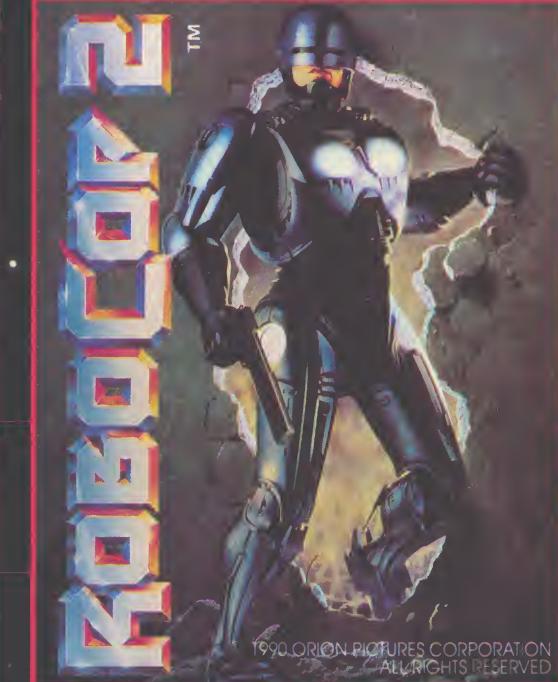
#### It's TOUGHER

The criminals wield some heavy hardware - but so do you! You can shoot but you must dodge their flak... heavy gunfire, trucks unloading their cargo onto your bonnet... it's the meanest pursuit game to hit the micro screen.



Seven levels of muscle-straining, reflex-testing, sideways scrolling fury! Destroy the lethal drug Nuke, face a stream of deadly Nuke gangs, and then - if you survive - face the terror that is

#### ROBOCOP 2!

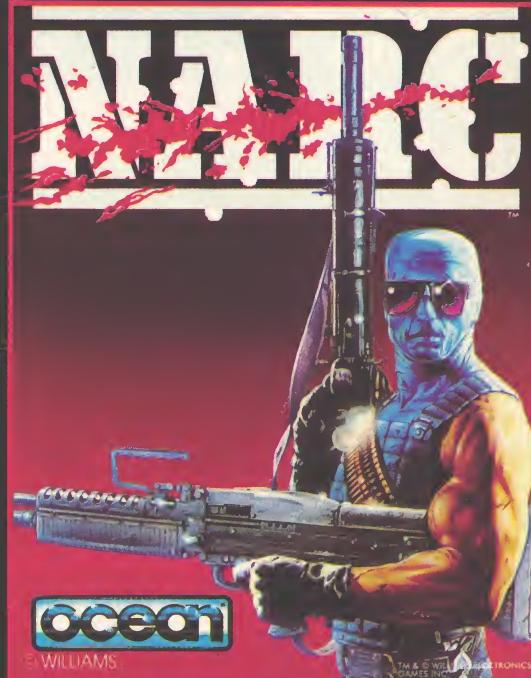


MORE THAN A GAME - ROBOCOP 2 IS THE PRIME DIRECTIVE.

NARC The arcade action thriller with the BIG finish. Infiltrate the criminal underworld - your mission is to seek out and destroy the king pin of the MR BIG CORPORATION - if you get that far.

You'll have to outwit his enormous army of body guards, gangs of charisma-bypass patients in trench coats, the bullet brain with the build of a rhinoceros and the breath of a dung beetle, packs of vicious canine yappies, the psychotic clown with an evil sense of humour - you'll die, but not laughing!

Then there's the gas guzzling cadillac jock - a cool specimen, elbow hanging on the door rail, a serious looking piece in his hand and ready to blow you away as he rolls down main street leaving you coughing lead.



It's not all bad... You've got a chopper to back you up, a mean shiny street machine, some heavy metal hardware and some pretty neat moves. And what about the king pin... did I say he was Mr. Big? No, he's

**MR BIG!**

AMSTRAD . COMMODORE . SPECTRUM  
ATARI ST . CBM AMIGA

MASTERS OF THE ARCADE  
CHALLENGE PRESENT...

# PLATINUM

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COLLECTION OF FOUR  
**CAPCOM**  
CLASSICS

GHOULS 'N' GHOSTS™  
FORGOTTEN WORLDS™  
STRIDER™  
BLACK TIGER™



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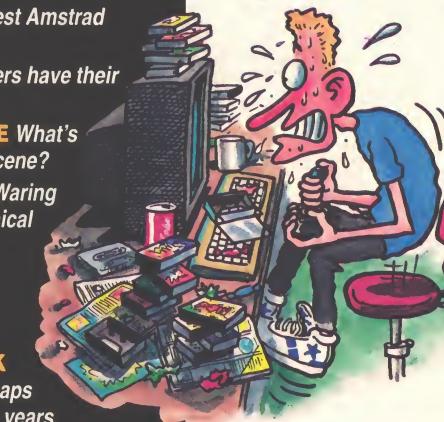
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AMSTRAD ACTION  
JANUARY 1991

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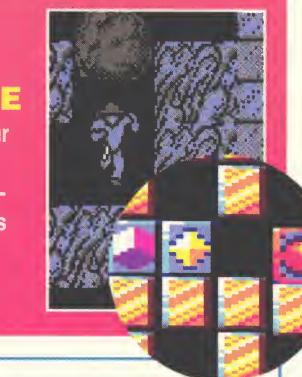


## 19 THE 50 BEST GAMES OF 1990

Part 2 of the AA end-of-year retrospective – plus your chance to vote for your favourite...

## 36 THE AA XMAS COVERTAPE

All the goodies on our bulging festive cassette plus full instructions. Feast your orbs on this, you lucky, lucky people...

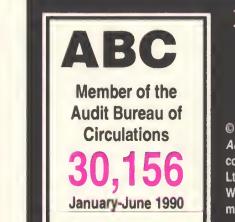


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Certainly we should have been! Full report on the AA Fifth Birthday Karting Kompo winners' day out at Kastle Kombe...



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## Serious

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Sorry and all that, but we're so busy putting your favourite Amstrad mag together that we don't have time to take all those readers' calls about cheats, listings, best buys and so on. That doesn't mean we can't help you out, though – course not! Just send a letter to Cheat Mode, Forum, Reaction, Ask Alex etc and we'll do our darndest to sort you out!

## Line up

## 82 THREE HAND-HELD TVs TO BE WON!

Codemasters brilliant Christmas give-away...



## 50 SWITCHBLADE

Is this the biggest, baddest and best platform game the world has ever seen?





# KICK OFF 2



## Blistering Pace - Pixel Perfect Passing - Superb Tactical Game Play

- ★ 1 to 4 players option (Amiga & ST)
- ★ Kit Design (Amiga, Atari ST & IBM)
- ★ Facility to load Player Manager teams and designed tactics.
- ★ Instinctive joystick controls to pass, dribble, shoot, head or chip a ball and do sliding tackles.
- ★ Two players teams mode against the computer.
- ★ After touch controls to bend or dip the ball.
- ★ Set piece Free Kicks, Corner Kicks, Throw Ins, Injury Time, Action Replay, red & yellow cards indeed host of features to create the atmosphere of a soccer game which is real fun to play.
- ★ League and Cup Competition with sudden deaths penalty shoot out.

**THE ONE** - Ultimate soccer simulation. 96%.

**THE ACE** - Brilliant. Buy, Boy, Buy. 930.

**AMIGA FORMAT** - Best footy game to have appeared on any machine. 94%.

**ST FORMAT** - What a game! Gem to play. Magic. 90%.

**C & VG** - Championship winning material. 95%.

**GAMES MACHINE** - Probably the best sports game ever. 92%.

**COMMODORE USER** - No other footie game can touch it. 90%.

**AMIGA ACTION** - Surpasses all other football games. 93%.

**POPULAR COMPUTING WEEKLY** - Nothing short of brilliant.

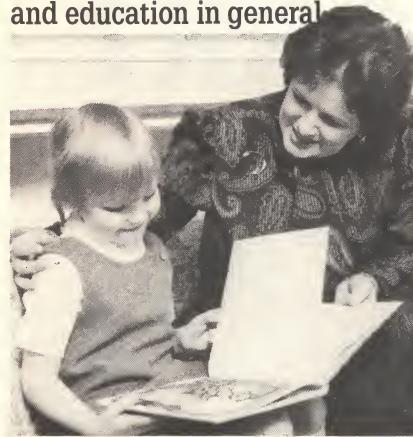
**NEW COMPUTER EXPRESS** - Computer football event of the year.

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IBM .....	T.B.A.
CBM 64, SPECTRUM & AMSTRAD .....	£9.99 Cas.
CBM 64, SPECTRUM & AMSTRAD .....	£14.99 Disc
KICK OFF 2 & WORLD CUP(AMIGA & ATARI ST) ..	£24.99
KICK OFF 2 (Expanded Amiga) .....	£24.99

**ANCO**  
COMPUTATION



Amstrad Action was so impressed with Prisma Software's 'multimedia' approach in Learn to Read with Prof that we wanted to know more. ROD LAWTON spoke to Senior Partner Trude Salisbury about the company, the software, and education in general.



Trude Salisbury works part-time as a voluntary teacher.

We were impressed by the way that you combined books and audio cassettes and a computer game. What's other people's reaction been to this? Because it's something quite new as far as we're concerned for computer software.

Well, the education establishments are very pleased with it. We've been selling to them for some years now on another format, and the parents are delighted with it. They've found the children learn to read very quickly and

**"...it is quite unique that our program actually teaches reading. I don't really think there is anything on the market to compete."**

then of course to prove that they have the books and then, having proved that to themselves, they can then go and read other books.

So did you produce the same sort of thing on the BBC, then?

Oh yes. We've been selling the BBC version to schools since 1985.

So have you modified the software at all for the home market?

Well we've improved it, shall we say. We've put more graphics in. It's been just as successful without a lot of graphics, but now, since we've gone into the home market we have put more graphics in and also added nine more words.

So the software is designed now in such a way that it can be used at home as well as at school.

That's right. That's what we're doing now -

## Learn to read with Prisma...

we're selling to the home and schools with the new version.

What do you think of the CPC as an educational machine? Obviously, it's not as popular in schools as the BBC - what do you think of its capabilities?

It can do what we want it to do, you see. As far as I'm concerned, it doesn't really matter, the machine. The game is the same on all the machines. So if that is the machine that is in the home it will do the job.

You've obviously looked at various other people's software as well. Without necessarily being specific, where do you think other publishers' educational software falls down?

Well, it's not for me to say, is it? I would just say that we are more specific, you see, and we have found that our software really does teach reading. So you can take a non-reader, or any age, really - we've sold to high schools - if there was a need. While we would expect in the home market to mainly sell to families with children of four or five years of age. We also sell to parents of older children if the children can't read. And it is quite unique that our program actually teaches reading. I don't really think there is anything on the market to compete.

Do you think it's unique in that it combines written material with audio cassettes and computer software?

It's got to, you see, because you can't teach words without putting them into context, and then when you've learnt the words, well you want to know what you've learnt - even four-year-olds want to know, you see. So the books then prove to the child that also they can practice what they've done. And then they have the confidence for another book.

Obviously you think computers are a valuable learning tool. Do you think they'll be a central part of education from now on?

Oh yes, I don't think you can get away from that. It's just how you use them, isn't it? Quite often, you see, they're used in schools with the brighter child, or the child that has already got some knowledge of reading and other things, and the children who can't read can't use them quite as much.

With the increasing use of computers in schools, do you think it's most important that kids get used to using them, or do you think that they do actually add an extra dimension to teaching?

Well, if they're used right, you see, they're just

an essential part now, and it will get more and more so, won't it? And they're a part of the home as well - more and more families get computers. And if you can use the computer as a teaching tool to support what the teacher is doing, whether you actually use it in the school and support what the teacher is doing, or whether you use it at home and support what the teacher is doing, it can only be a good thing.

**"...if you can use the computer as a teaching tool to support what the teacher is doing... it can only be a good thing"**

Are you planning further releases?  
You've got Part 2 of Level 1, haven't you?

Yes.  
That then takes the same words and looks at them in more detail. And then early in the New Year we will have Part 3 and 4. Part 3 helps children to make sentences - this is something children don't find very easy. And Part 4, then, deals with comprehension, to ensure that children really understand their reading - but all in a fun way. So they don't know that you're encouraging them to write sentences or teaching them comprehension. And that is Level 1. Now all these four parts can be used on their own - you don't have to start with Part 1. But each one has a different thing to do. And then we go on to Level 2, which is really the same thing, but teaching more words, you see.

It sounds like there's quite a lot in the pipeline, then?

We've found that there was a need for the other parts. I go into a school on a voluntary basis, you see, and work with children, and through that I have found the need for the other parts. And since then we have had letters from parents and teachers to confirm that.

Are you likely to branch out in future, or are you going to see how the Learning with Prof series goes?

We're already branching out, you know! You can't stand still, can you? There are other things in the pipeline as well, which I am sure you will get next year.

Right, so we'll have to wait and see, then...? Yes!

# Amscene

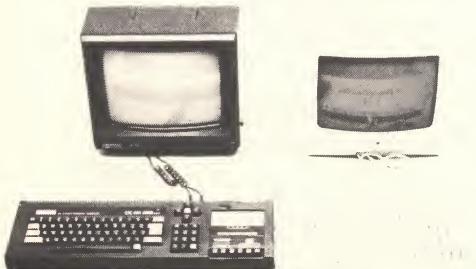
releases... updates... previews... new releases... updates... previews...

## BUT WILL IT WORK?

### Unexpected compatibility problems emerge with new 6128 Plus machines

Compatibility problems concerning Amstrad's new Plus range seem worse than originally feared. It's emerging that a number of products designed for use with the CPC will not work with the new computers.

The new machines are designed to emulate the old CPCs exactly – until a cartridge is plugged in, whereupon the new console hardware is activated. It seems that some existing software nevertheless does clash with the hardware.



• CPC6128 and 6128 Plus: how compatible are they?

At first it was thought that the amount of software that wouldn't work with the machine would be very low – but increasing numbers of programs are proving troublesome when loaded on the new machines. Both games and serious programs have been affected.

The incompatibility of these programs is currently being attributed to programmers not 'following the rules' set out by Amstrad, rather

than any technical problem with the computers.

Among those games affected are three Loricel products – *Harricana*, *Bumpy* and *Mobileman*. These fail to run on Amstrad Action's new 6128 Plus but work perfectly on the office CPCs.

We canvassed the opinion of leading software house US Gold and were told that efforts are being made to ensure that all new games work on all machines. It's unlikely that previously released games that have been found to be at fault with the software will be altered to work with the new computers, though recent games still doing well may be converted.

This action will almost certainly be taken by all major software producers, meaning that once the new machines are established, all new releases should work without problems. It does mean, however, that older games that don't work on the Plus will not be upgraded.

A similar problem occurred with Atari's 16-bit ST machine, when the company upgraded it to the STE. However, the Amstrad compatibility problem would appear to be far less serious.

#### Multiface frozen

The Multiface II game 'freezing' device has also been found to be incompatible with the 464 and 6128 Plus machines. The unit appears to operate normally until the 'save' function is accessed, upon which the computer locks up, requiring the machine to be reset.

It appears that Amstrad had tested the



• Multiface II hits problems with Plus machines.

Multiface for compatibility with the Plus on manufacturer Romantic Robot's behalf, and gave the company the green light. Romantic Robot then started to produce the unit with the new 'D' type connector that the Plus uses. The problems only became apparent when customers complained that the device did not work properly.

Romantic Robot is currently redesigning the product to work with the Plus. According to the company, the problem is a fairly minor one. It's caused by incompatible software which needs to be rewritten, rather than a hardware clash. The modifications should be complete by the time you read this.

• Anybody having trouble with a Multiface that they've already bought should get in contact with Romantic Robot, who have promised to exchange all faulty units with correctly functioning ones.

Romantic Robot can be reached at 54 Deanscroft Avenue, London NW9 8EN, tel: 081 200 8870.

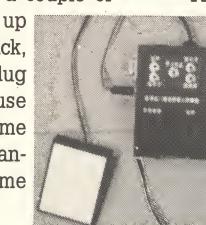
### BMW JOYSTICKS!

Joystick maker Spectravideo is no longer going to be selling Konix joysticks. Another supplier for the highly-rated Speedking and Navigator models has yet to be found.

In the meantime, Spectravideo is to launch a new range of its own, collectively titled the Logic 3 range.

"Logic 3 products will be designed with three main criteria: style, engineering quality and reliability. Our products will be the BMW of the joystick market." So says Spectravideo boss Ashvin Patel, who may or may not own one of those Bavarian beasts himself. (No-one wants a joystick like a Ford Escort...)

Details are all very hush-hush at the moment, and no pictures or prices are available yet. Watch this space...!



### Keep it under control

Fed up fumbling with joysticks? Can't take control with the keyboard? A new widget to allow custom control for your games playing has just become available.

The Game Pro MK2 plugs into the joystick socket of your computer. It has a couple of built-in buttons duplicating the up and down movements of a joystick, and a load of input sockets to plug further controllers in. These use standard jack plugs, so the home experimenter can construct all manner of weird and wonderful game playing devices.

In addition, there are two joystick ports built in, acting as a joystick splitter for the CPC. Now you'll be able to play two-player games they way they should be played; with two joysticks.

The unit also comes (there's more?) with two foot-pedals. Prices range from £19.99 to £34.99.

CpRs Design Technology is responsible for the product. The company can be found at 70 Potters Road, Eynesbury, Hardwicke, St Neots, Cambs PE19 2NN. Tel 0480 76038 (evenings only).

## 6128 Plus will load from tape!

Up until now, one of the fiercest criticisms of Amstrad's new 6128 Plus is that it will not load from tape. Its predecessor, the CPC 6128, loaded tape software easily via its built-in tape socket, but the Plus model has been restricted to disk-only operation.

Until now! WAVE, up in Cumbria, is offering a special service to 6128 Plus owners whereby their machines can be converted to load from tape. The machines will still not be able to save to tape – but few people would want to do that anyway. The principal need for the tape loading feature is for budget software, after all.

The cost of the conversion work is £20, with an extra charge for carriage. Alternatively, if you buy your machine from WAVE in the first place, the company will convert it for you free, as well as offering a £25 discount off the RRP.

For the latest details, write to WAVE at 1 Buccleuch Street, Barrow-in-Furness, Cumbria LA14 1SR, or call 0229 870000.

- N.B. If you do have your machine converted by WAVE or anyone else, the manufacturer's warranty will be invalidated – you have been warned!

### THE DRIVE SAGA CONTINUES!

Microstyle has embarked on the DD-1 drive price-cutting war again with a remarkable offer on these Amstrad drives. For as little as £69.99 (plus £3 carriage) you can equip yourself with an external 3-inch drive for your 464, complete with necessary interface.

Microstyle is stressing that the offer can last only until the stocks are exhausted, so if you want to take advantage of this monster offer, get in there quick!

Regular readers will know that following Amstrad's decision to cease manufacturing these drives, there has been a price-cutting bonanza on these items. Stocks have gradually fallen, however, and the overall price trend has been upwards. Until now...

Microstyle's address is 212 Dudley Hill Road, Bradford, W. Yorks BD2 3DF, or you can call 0274 636652 (after 2pm).

### PICK UP A PENGUIN

Last month's *Free for all* section carried an incorrect phone number. Penguin Software's correct number is 0483 763223, and not as printed. By the way, if you've tried getting hold of boss Dave Carter via the directory, it doesn't work, and you'll have been making a totally unrelated Mrs Carter very annoyed.

Sorry folks, and especially Mrs Carter!

### But no, seriously

How about this for an excellent idea – a 'bundle' for the new 6128 Plus which included serious business or word processing software on a cartridge? We reckoned that the cartridge format would be very suitable medium for all sorts of serious utilities. Integrated packages that allow you to switch between applications instantly, for example. Or word processors with huge built-in dictionaries.

This would, we thought, solve two problems. Amstrad could affirm the Plus range as being general-purpose rather than just games machines, and if the software was to be given away with every machine, a serious producer would jump at the chance. We put the idea to Amstrad...

Unfortunately, Amstrad said that it had no plans for any such programs, though it would welcome the idea if a serious software manufacturer were to approach them. The company also dismissed outright the idea of a 'serious bundle', say-

ing that the new models are being pushed purely as games-playing machines. "It would just confuse the market" Amstrad observed, when asked why a serious bundle wasn't on the cards.

Amstrad already produces bundles with its PC machines, and clearly wishes to separate the functions of the two ranges.

• Arnor, the makers of word processor *Protext*, told us that it wasn't considering cartridge releases, but wouldn't rule them out as a future possibility.

We want to know what you think. Should the new machines be restricted to games only? Or should there be serious applications for a machine that is perfectly capable of making use of them? If there is enough interest we'll take it up with the companies involved.

- Will we see the brilliant *Protext* on cartridge? At the moment it seems not...

### THE CHARTS

Well, *Shadow Warriors* is still there at No. 1. You lot out there obviously like it, even though we only thought it worth a measly 68% back in AA68!

As for *Batman - The Movie* and *Robocop* – can you believe they're still going! It's nice to see some of the smaller software houses like Chrysalis, Challenge and Addictive getting in the charts too.

### FULL-PRICE GAMES

(Software priced over £4.99)

1	1	Shadow Warriors	Ocean
2	5	Turrican	Rainbow Arts
3	4	World Cup Soccer '90	Virgin
4	3	Chase HQ	Ocean
5	6	Robocop	Ocean
6	14	Batman - The Movie	Ocean
7	8	Manchester United	Chrysalis
8	16	Foot. Man. World Cup	Addictive
9	12	Heroes of the Lance	US Gold
10	2	Back to the Future II	Mirrorsoft
11	20	Italy 1990 Winners	US Gold
12	15	Gazza's Super Soccer	Empire
13	7	Bomber	Activision
14	19	World Cup '90 Comp	Empire
15	NE	Cricket Master	Challenge
16	11	Heroes	Domark
17	NE	Lords of Chaos	Blade
18	NE	Int. 3D Tennis	Palace
19	NE	Turbo Out Run	US Gold
20	10	Dragons of Flame	US Gold

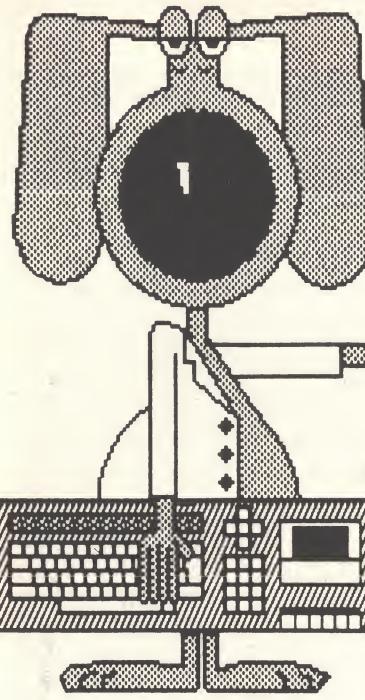
### BUDGET GAMES

(Software priced under £4.99)

1	1	Quattro Adventure	Codemasters
2	8	A Question of Sport	Encore
3	NE	Pro Boxing	Codemasters
4	5	Rastan	Hit Squad
5	7	Paperboy	Encore
6	NE	Big Trouble/Lit. China	Alternative
7	NE	Temple of Doom	Kixx
8	NE	Daley Thomp. Chall.	Hit Squad
9	NE	Hong Kong Phooey	Hitec
10	NE	Salamander	Hit Squad

This chart is compiled by Gallup Ltd.

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# Reaction

Controversy, contradiction and calumny! Our readers grind their axes...

### Free for all frolics

I'm a 24 year-old electronic engineer and have had my trusty 464 for six years. I think your mag is excellent and you seem to have the right balance between serious and "fun" software.

I particularly enjoy Free for All and would be very grateful if you could tell me where to go for the PCB-Draught program reviewed in Issue 62. I don't have a modem so I hope it's not from a bulletin board...

I only have one piece of criticism and that is you should update the "Where to go" box in Free for All. For a number of months now the DW Software entry mentions the "marvellous WIMP environment desktop reviewed last month". There must be a few very confused readers out there (they're not the only ones – ed).

One more thing – what is a clam? Is this the new form of European currency?

Keep up the good work.

Andy Mans  
Newbury

P.S. If by amazing coincidence you print this letter, please please spell my surname properly!

AA: Oh. All right. It's Andy Properly of Newbury.

PCB-Draught, eh? Caroline wasn't in when we phoned so we're not sure if it's PD. If it is, it should be knocking around a few of the libraries. Try WACCI – the address is in the Where to go box.

Well done for spotting the deliberate mistake we made by leaving that out-of-date item in Free for All. Award yourself 10 points.

A clam is a salt-water crustaceous gas-

### Down with tapes

I must be one of the few people around who supports the lack of a cassette port on the new 6128 Plus computer.

Let me explain. Once upon a time the IBM PC (what's that? – ed.) had a cassette port. Now it does not. Every user of the PC uses disks, and quite happily I might add. The way to get the whole CPC user base onto the more practical storage medium of discs is to 'force the change', and I support Amstrad if this is their intention.

Can anybody really prefer cassettes? They may be slightly cheaper to buy, but this is probably due to the larger production runs for cassettes than for disks. If a larger customer base is forced to use disk, then the price difference will close, meaning that the advantages of disk will cost little or no more than cassette.

How many 464 owners buy their machine on the basis of immediately adding a disk drive and using disk as their primary storage medium? They may still buy software on cassette, but if they then copy their cassette to disk (possibly with the Multiface) and use the cassette no more, then they do NOT support cassettes. The fact that they buy a 464 and

tape software does not infer otherwise.

my view is that if you want the advantages of disk, then go the whole hog. I support disk options for all CPC software including AA cover cassettes, and the freebie cassette games given with AA subscriptions. What's AA going to do about these? They are useless to 6128 Plus owners.

John Fairlie  
Bristol

AA: If Amstrad was to phase out cassettes, would it begin by creating a computer that couldn't support them?

The 6128 Plus will certainly have that effect. And as long as it doesn't happen too quickly, leaving people high and dry, isn't the gradual reduction of the amount of cassette-based systems a good thing? Disks are, after all, much more convenient, more reliable, faster, and in all respects apart from price, better. It must be about time that a distinct move was made in favour of a disk-only market.

Or is it? What do YOU think? Disk? Tape? Both? Write to Reaction and get YOUR views known.

### Favourite cover versions

To start off, I would like to say how brilliant your mag is, and how I think it can never get better, but it always does. OK, I have finished my grovelling; now to get on with my letter.

I typed out Hacker, in issue 43. It seemed to work well, but what do I actually do when I get given "POKE & 023E,0"? I have discarded the last two numbers as it told me to.

I read a letter in a past issue asking why it would cost £2.95 if you had a cover cassette. How come then, on your birthday issue you had a cover cassette (and a very good one too) but the issue cost only £1.95?

I think the cover of issue 62 is the best one yet. I do not know why, but it just is. Please please please answer this letter.

I also want to know what AA's favourite game is. At a guess, I would say Rick Dangerous. And is RoboCop the Amstrad game that has stayed in the charts for the longest? You had better answer this letter or I will set him on you!

AA: RoboCop's Directive Number Seven is as follows: "No member of Amstrad Action or Future Publishing may be harmed". It's a little

### (Christmas) stocking the cartridges

I am thinking of buying a GX4000 console. Would you please let me know what games will be available for it by Christmas?

Ben Spires  
Stroud



AA: How about... Gazza, Dick Tracy and Spiderman from Entertainment International? And then there's Navy Seals and RoboCop 2 from Ocean, Epyx Games, Tennis Cup from Loriciels, Tin-tin on the Moon from Infogrames, Klax from Domark and many more. All these should, with any luck, be in the shops before Santa performs his annual soot-covered descents.



## REACTION

known (and totally made-up) fact that Adam 'Doc' Waring actually programmed the RoboCop software, and his silicon heart is that of a now-defunct CPC 664.

As for cover cassettes. It would cost much more for a cassette every month, but when we mount them (i.e. twice a year), we actually pay much of the increased cost ourselves. Such is our generosity.

Which cover IS the best? We often argue about this, and several scuffles have ensued.

### ● Cartridges for all and sundry?

I was reading Amstrad Action (Issue 62 page 21) when I saw an advert for the new Plus machines. It said that you could plug in console ROM cartridges. My question is can I upgrade my 6128 to load cartridges like the Plus? And if it is possible, would you tell me what the extension is called, and the retail price of it?

David Taylor  
Warrington

**AA:** It is astronomically unlikely that such a device will ever exist. It certainly doesn't at the moment. If, in the dim and far off future it does, we'll let you know all about it (and you'll also witness the advent of porcine aviation over Warrington).

### ● Fair play for astronomers?

I have always believed that we computer buffs are a decent bunch of people ready and willing to share information with others, as I have done so on numerous occasions. Unfortunately, there are those amongst us who are not able to play the game.

In Amstrad Action Issue 60, Sept 1990 you published my letter seeking a copy of Amsoft's Star Watcher program to which I did not receive any direct reply.

However in your Issue 62, Nov 1990 you published a letter offering me a copy of this tape if I would ring the telephone number given. Upon doing so I was surprised to learn that it had been sold to a person in Scotland who had seen the letter with the telephone number, without giving me the opportunity to purchase it.

I realise that nothing illegal has been done but if this had been me I could not have behaved in such a reprehensible manner to a fellow computer user.

I wonder, therefore, if you would be kind enough to publish my full address and telephone number so that anyone who has a copy of this tape can contact me direct.

David Webber  
Cummel Fayle  
28 Ballaterson Fields  
Ballaugh  
Isle Of Man

Tel: 0624 897462

**AA:** If anybody has a copy of Star Watcher by Amsoft, could they get in touch with David at the above address. Go on - restore his faith in human nature.



### ● Sexism - the debate continues

I am afraid it is time once again for me to impose my views upon you. After reading the letter from a certain Catherine Dawson I nearly hit the roof. For a start she was accusing your mag of being sexist, when you have never portrayed such opinions. She then goes on to say 'you can't say... women are hopeless at computer-related subjects' - who said they were??? Is this woman paranoid or what?! OK, so you learned BASIC at eight etc... good for you. Just don't hit me with this feminist crap, OK? It's a computer mag, not Women's Lib.

All that aside, I thought she had some kind of sense saying that there shouldn't be sexism, but she went on to show that she was actually no better or less prejudiced than sexist men by saying that women were the superior sex at anything they tried. Not so bloody unbiased now, are you??

Given your 'opinions', am I right in thinking that the school you pass your mag around at is primary school, or kindergarten maybe?

Right, now where was I? Oh yes, someone wrote in saying that the Home Computer Club was a rip-off. Well, OK. In this example it was you who was at fault, but they do rip you off. For example if a compilation is brought out; let's take the Cecco collection; well it comes out at £10-£20, but they say that the games come as four individual ones and charge you with the reasonable price of £40 minus the 25% Total rip-off or what?

I am glad to see you have ditched the Buyers Guide. Total waste of space. It was the

same every month. I do hope you don't mind me asking, but did the Publishers make you do the cover tape on AA61? It's just that Your Sinclair have the same tape, more or less, on their cover. They also did the free 'Cheat Mode' booklet. It's just that since Future Publishing bought YS, everything you do, YS also does. So do you come up with the ideas or does Future Publishing?

May I say that I was less than happy about paying an extra 50p for a tape with a demo and a game on it. In fact, I am sending some progs in to Type-Ins, and to show you what I think of the tape, I am sending the progs on it!!!

I have said it before, and I'll say it again, don't put cover tapes on every month. Because if you do, you will rely on the tape selling the mag, not the contents, so you will start getting slack with the mag.

And I want a magazine, not a game demo.

Adrian Forbes  
Gourock

**AA:** Come on, Catherine Dawson. Isn't it about time you wrote in again? We'd love to have another letter from you, and you must want to reply...

And about the Home Computer Club; they don't price the games in a collection separately; they take the Recommended Retail Price of the collection in the shops, and lower that by the stated amount. It's possible they were merely stating the price that the games would have cost if they were sold separately.

Covertapes. You might not want the programs on them, but many readers enjoy their occasional appearance (or so we fondly believe).



### ● Has AA forsaken us?

I saw the new logo. Why change? It looks terribly dated and crass - as if it had come off the cover of a games-only Speccy mag. Why are games getting more and more coverage?

Next quibble: "Britain's Best.. CPC 464 6128 Plus . GX4000 Console. Surely this leaves out original users? How about 464 664 6128 464 Plus 6128 Plus . GX 4000 Console?"

Why has serious software got so small? I think that's about all I've got to moan about. I hope my opinions are listened to - wouldn't it be a shame to lose a reader who has all 62 issues?

Mark Baxter  
Stockport

**AA:** The logo was really up for a redesign. We like it a lot. But everybody has their own opinion, and we only find out what you think if you tell us. And as for original users. We've stated repeatedly that we will continue to cater for all existing users. we do mirror the changes in the CPC owning public. For example games sales are increasing rapidly, consoles are selling and cartridges are being produced at a prolific rate.

It would spoil the balanced look of the cover if we had a massive box paying homage to every Amstrad CPC machine available. You just have to open and read AA to realise the extent of our coverage.

### ● Veni vidi MIDI

I am writing to your esteemed publication in desperation. The problem is that I am interested in buying a MIDI synthesizer and due to the fact that I am totally ignorant of any aspect of music I have in desperation set these questions;

- What synthesizer would you recommend in the £250 region (i.e. a low budget)?
- Where could I acquire an interface and how much would it cost?
- What software would you recommend that would fully utilise the synths' power (for a low budget)?

● What's the best synth on a low budget?

I would be very grateful if you would answer these questions, and I'm sure that many would benefit from the answers.

Kieran Bury  
Co. Sligo, Eire

**AA:** There are many good keyboards available for under £250. Examples are the Casio CT470 costing £229 or the Yamaha PS 790 for £230. The Yamaha includes 100 sampled sounds, a



## REACTION



five octave keyboard, 50 sampled drums and stereo sound.

However, your local music shop should be able to offer much more detailed advice.

In the MIDI interface department, Datel Electronics makes the Music Machine. For under £50, this offers a wealth of features for the MIDI musician. It's also a sampler and a drum machine. It comes with its own software, so you don't need to worry about that aspect.

### ● Colour in a drab world

Earlier this year, after studying the many types of dot matrix printers, I decided that the Star

### ● Money-clip art?

I feel I must write to you concerning your review in the November 1990 edition of Amstrad Action, of the recent addition to Goldmark's software range, Graphics Galore.

I recently purchased six of the clip art collections after seeing an advert in another CPC magazine. I first obtained the catalogue to see what was available and to see if it would suit my needs at this present time. This I received by virtual turn round of post, despite sending a cheque and assuming a wait of between 10 and 21 days for the cheque to clear.

I then ordered the six sets that suited my particular purpose, and again was extremely surprised at the turn round from the company. The total cost for these six sets was £62, and not, as you infer, £72. The fact being that if one requires more than one set, up to a maximum of twelve, these can all be fitted onto one disk. Only the first set costs £12; any additional sets on the same disk are then sold at £10 each.

As to the fact that some of the pictures are the same, this being just the thing I need, as at the time I am producing small newsletters for two local churches, among other projects, and the different styles are extremely useful to differentiate between the two.

As to the overall cost of this suite of programs, £378 if all the sets were purchased as above, on four disks, and not £444. As I only have a CPC 6128 and 464, I would not like to have to purchase a PC, ST and Mac to enable me to have these facilities at my disposal. As you quite correctly stated in your review, someone else has gone to the time and expense of converting these to allow we CPC users to have facilities that were previously only available on several different systems.

How much, for example, would Printmaster for the Apple Mac cost? As I understand that this has 122 pictures as its basic range.

Working as I do for a local printing firm and using computers myself, and having just started to convert ASCII files alone from one

format to another, I can understand the time and effort spent by Brian of Goldmark Systems on getting this program ready for us lesser mortals to use. This includes writing the program for actually allowing the individual pictures to be merged into our individual DTP programs.

As a follow up to using this program, I wished to try something else with it and upon phoning Brian one evening at about 9pm with my query, he then went through the method of doing what I wanted over the phone, while I did the keying as he spoke to me. Also the following night I received a phone call from him stating that he had been thinking about what I needed to do and that he had thought of a better way and that he was sending me a copy of the keying instructions to allow me to change what I had been doing to make it easier, now that's what I call back-up service.

So for my own particular DTP needs I think Goldmark have got it about right for this particular program, as to the overall price, one must assume that there is probably not an extremely large market for this program, as there would be for "games", and also the fact that very few people are going to buy the complete set of disks, then I would think that this price has to reflect the time and trouble that Brian has taken to get these pictures available for use on the CPC.

As to the recent accolades given out in AA for excellence of sales services, my own are: Goldmark, for response time on delivery; Dowling Computers, who do not advertise with you, where I bought my Star LC10 Printer; Siren Software, again for response time; PCW World, and David Wild, although



● Goldmark's clip-art: Great value, says David Calero. Better from the public domain, says Dave Havard.

I was very interesting in the recent review you did on the Goldmark Clip Art Library.

Like you, I was numbed by the price, and although I found the prospect of such a vast range mouth watering, I was not prepared to pay such an amount.

I decided to follow up on your comment that it was basically PD software, and contacted several PD libraries.

PCW World came up trumps, with over 20 disks-worth of clip art for Stop Press and other formats. I rang them to check CPC compatibility, and they offered me a disk to test.

To cut a long story short, I can confirm that PCW World, regular advertisers in your magazine, carry an extensive library of clip art, which is compatible with the CPC and Stop Press. What's more, at only £4.95 per disk (which they supply), less for members, it is less than half the price being asked for by Goldmark.

Such service as I have found, and at prices like these, I felt it prudent to pass this information on to you, so that you in turn can inform your readers. The titles in question are:

G 106 1 disk  
G 113 2 disks  
G 116 16 disks  
G 119 2 disks

Between them they mount up to over 2,500 pieces of clip art.

Dave Havard  
Fareham



## REACTION

LC10 Colour printer was what I was looking for because it was easy to use and relatively cheap. I knew when I bought it that the colour function was limited by the lack of available compatible software. However, after adapting Tasword 464 I was able to print full colour text, although as yet I am unable to print colour graphics because of the lack of a colour screen dump program for the Amstrad CPC 464 on cassette. Please, does anybody know of a company which has marketed such a piece of software, or a way round this problem?

Andrew Glitherow  
21 Outfields Drive  
Cropston  
Leicester  
LE7 7HA

AA: Hmm. There must be thousands of teeming people out there who know the answer to this knotty little puzzler. If so, write to Andrew at the address printed.

### To upgrade or not to upgrade...?

I have been thinking of upgrading my CPC 6128 for a while, and after seeing the new 6128 Plus on the TV I thought maybe I should go for one of those. But at the moment I am unsure and need some questions answering:

1. How much could I ask for my CPC 6128 (with colour monitor)? It is in excellent condition.

2. Does the new 6128 Plus have all the functions that the CPC 6128 has (plus any more)?

3. Can you use existing CPC 6128 disk software on the 6128 Plus, and also could I use my joystick on the new machine?

Andrew Gauton  
Warrington

AA: And as if by magic, we provide the answers:

1. As a rough estimate, second-hand prices for existing CPCs will be around half the original price. Thus your 6128 and monitor will be worth £200 (if it is colour - a mono screen will fetch £150). Please note that these figures are only estimates.

2. There is no cassette port built into the 6128 Plus. Of course, there is a cartridge port, so you can plug in console-style cartridges (such as can be used with the GX4000) and play them instantly. This is possibly the greatest asset of the Plus range. They are effectively both a GX4000 console and an uprated CPC. Apart from these major differences, the machines retain a lot in common.

3. The new 6128 Plus would seem to run the vast bulk of CPC 6128 software. When we hear of games which are not compatible with the 6128 Plus, we'll let you know.

And finally, your joystick will work perfectly with the 6128 Plus. There are, in fact, two joystick ports, so two players can wiggle at the same time. Ideal for two-player wiggling-type games! The Plus range come complete with console-style joypads, which have two fire buttons for extra permutations with certain games.



### Ribbon development

I liked your story about your "Old Man Ribbon", which had been re-inked 720 times. However rather than plug a commercial spray re-inker probably costing £8 to £12, let me tell you how I achieve the same result for only 85p.

First, this only works with DMP-2000 or similar ribbons, where the ink is held on a felt wheel around which the ribbon runs. Thus having made sure you have the correct ribbon, pop down to your local stationery shop and buy a bottle of Stephens Endorsing Ink for 85p. This is the ink used for re-inking rubber stamp pads.

Now remove the ribbon from the printer and carefully prise off the top of the ink wheel box using a small electrical screwdriver. Inside, you will find a felt ink wheel on which rest two small knurled rollers. The printer ribbon runs outside the two rollers, pressing them onto the wheel to pick up the ink.

A few drops of the endorsing ink should be applied to the felt ink wheel - not too much, it's strong stuff. After allowing a few minutes for the ink to soak in, clean off any surplus with a tissue and replace the top of the box, taking

care to ensure that the knurled rollers are in place.

If your ribbon has gone bone dry, you will have to moisten it by placing a drop of ink on a saucer. Hold the ribbon in the ink with a finger (messy) and pull it through with your free hand. Once again, mop off the surplus, place the ribbon on a newspaper and dab it with a tissue.

Now pop the ribbon back in the printer and test your new ribbon. This can be repeated hundreds of times with your one 85p bottle of ink. Amstrad Action will be able to vouch for the quality of the printing in this letter.

John Chambers  
Stafford

AA: The print quality of the letter sent to us by Mr Chambers is indeed very high. This does therefore seem to be a very cost-effective solution to the re-inking problem.

It does require a little care, as do many fiddlings with printer ribbons, because they have a tendency to unravel and wander off in all directions.



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# On the Grapevine...

News, views, previews, scandal, gossip... the place where we bring you up to date on who's who and what's what in the big, wide world of computer entertainment...



## Gazza calls it off

Adam was getting ever so excited. He was so looking forward to meeting the great man for real. His dreams, though, were shattered when Gazza got punched on the hooter by Steve McMahon, and ran off to Newcazza to be with his Mam.

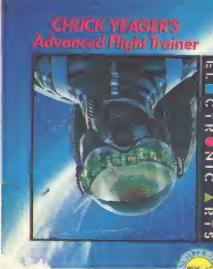
There was to have been a big press do at White Hart Lane (home of Tottenham Hotspur, Gazza's team), to promote Gazza's new footie game called *Gazza*. Unfortunately, the footie star suffered a broken nose, and couldn't make it. It was especially disappointing because we intended to get Mr Gazza to autograph an exclusive box of Kleenex. Never mind, we'll just have to go without (boo hoo).

## Disks on budget

People with disk drives must be fed of budget games always coming on tape. Electronic Arts, which hasn't been terribly active in the Amstrad scene of late (boo!), is relaunching its range on budget - on both cassette and disk.

Initially, two games will be released on EA's Star Performer label. There's *Chuck Yeager's Advanced Flight Trainer* (Mastergame, AA42), and *Skate or Die* (the less said the better, really).

The tape-based games will sell for the usual £2.99. If you want the disk versions then you'll be expected to shell out £6.99.



Now you can fly like Chuck Yeager for £6.99.

## It's a stunner!

One of the most exciting games in the arcades at the moment is *STUN Runner*. (What do you mean, you've never heard of it?) You pilot a motorcycle-like machine extremely quickly through lots of tunnels and try and beat all the other vehicles. It has the most amazingly slick 3D graphics, and apparently uses lots of polygons.

"So what", you cry, "there's no way that any home micro version can hope to keep up with the arcade machine."

Ah, well, Domark has realised this, and instead of all those poly-wotsits and stuff, the programmers have turned it into a sprite game in an effort to get things moving along nice and quickly. Look out for the review soon, folks!



• *STUN Runner*: out soon on the Amstrad – but no 'proper' 3D.

## Good God!

You know it's going to be one of those days when you wake up with a severed horse's head on the pillow next to you...

The *Godfather* appeared in 1972, and told the story of a bunch of Italians killing each other. The sequel followed two years later in '74, but it took another 17 years for them to get round to making the third one.

*Godfather III* hits the silver screens in March next year.



• Would you buy a used Ferrari from these men?

## Codies compilations

Fans of the *Dizzy* games will no doubt be all eggs-cited about the prospect of another *Dizzy* game. The long awaited *Dizzy Four - Magic Land Dizzy* will be in the shops soon. However, the hard-boiled hero will be released on a compilation containing all five *Dizzy* games to date (including the spin-off *Fast Food*).

The *Dizzy Collection* will sell for £9.95 on tape (a disk version won't be available). Now, this may be attractive for those new to the *Dizzy* games, with the games working out at less than £2 each. However, *Dizzy* fans who own the other games already may not be quite so eggs-tatic about buying the compilation. Alas *Dizzy 4* won't be released on its own as a budget title until after Christmas.

Codemasters has another full-price package due out soon. Called *Megahot*, it comprises the eight best-selling Codies budgies (excluding, of course, the *Dizzy* games).

The line-up includes *Mig 29*, *BMX Sim*, *Grand Prix Sim*, *ATV Sim*, *International Rugby Sim*, *Fruit Machine Sim*, *Advanced Pinball Sim* and *Pro Tennis Sim* (that's enough sims - ed).



Before the advent of the home computer, and all those soccer sims with it, people used to spend their time flicking bits of plastic around a lumpy pitch on the living room carpet.

In fact Subbuteo is still an incredibly popular pastime. Over five million people play around the world. And you'll soon be able to join them - without moving away from the keyboard of your favourite computer.

Electronic Zoo has been granted the licence for the computer version of Subbuteo. Now that may seem a strange idea for a footie game - but not according to Electronic Zoo. The company points out that there have been hundreds of attempts at simulating soccer on computers - with varying degrees of success. Rather than trying to simulate an eleven-member team sport - pretty difficult to do successfully - it is interpreting a game that's designed for just one or two players.



• Just like the real thing! (Subbuteo players fall down and roll around a lot, too.)

- 3 The name Subbuteo is from the Latin name for Hobby Hawk - Falco Subbuteo.
- 4 The game was invented by a Mr Peter Adolph in 1947.

5 The original Subbuteo players were made out of cardboard. Their bases were coat buttons.

6 Early Subbuteo sets did not include a playing cloth. Instead, instructions were given for drawing one out on an old army blanket.

7 The most popular Subbuteo team is Liverpool.

8 Footballing brothers Bobby and Jack Charlton are respectively Presidents of the UK and Irish Subbuteo Associations.

9 More than 100 million Subbuteo figures have been manufactured.

10 Over 700 different strips have been available since the game's invention. (There are around 500 now.)

### WIN! WIN! WIN!

Electronic Zoo is celebrating the launch of Subbuteo by throwing ten copies of the real Subbuteo table football game in your direction.

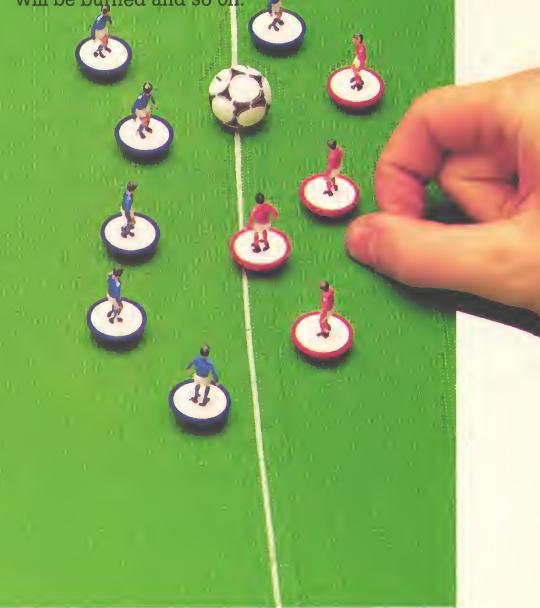
All you need to do to enter is answer these three sporting questions (you'll need to be on your toes, though, 'cos they're a bit tricky):

- 1 What popular sport does table football emulate?
- (a) Football
- (b) Tennis
- (c) Caber-Tossing

- 2 What well known sport is featured in the TV programme *The Match*?
- (a) Synchronised Swimming
- (b) Football
- (c) Golf

- 3 What sport did the famous footballer Nobby Styles play?
- (a) Rugby League
- (b) Curling
- (c) Football

Entries on a postcard to: Flick Off Comp, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2BW. Make sure that they arrive by 31st January 1991. The usual rules apply. Multiple entries will be burned and so on.



## Gremlins 2

Those lovable little creatures are back again. You know, the cute cuddly ones that turn in to ferocious fiends should you accidentally feed them at the wrong time...

The whole of the AA team sadly missed out on the film (*I didn't, but I wish I had - ed*), so we cannot divulge any of the plot. We'll can make a guess, though. The gremlins are probably causing all sorts of mayhem, and the hero, we anticipate, ends up killing them all.

We were sent these screen shots by Elite, the company producing the game of the film. It looks good, and we'll



tell you what we thought of the game itself in the new year.

## Navy Seals

Coming soon on the console will be *Navy Seals* from Ocean. As far as we know the game has nothing to do with blue-coloured marine mammals. Instead it's based on a film that nobody seems to have heard of. Apparently, the Navy Seals are a bit like the SAS, only they're American, and are part of the Navy, rather than the Army.

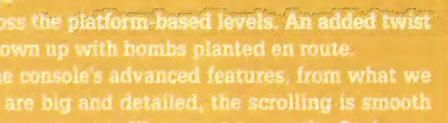
The plot of the film is that some country men have been taken hostage and it's the Seals' job to get them out of them. Where there are hostages, there are terrorists too, so lots of those have to be killed.

In the game, there's plenty of slaughter, to be sure, as your character makes his way across the platform-based levels. An added twist is that crates of Stinger missiles need to be blown up with bombs planted en route.

Ocean seems to be making the most of the console's advanced features, from what we saw of the development version. The sprites are big and detailed, the scrolling is smooth and fast, and there's plenty happening on screen at once. We expect to see the Seals surface after Christmas.



• Kill kill kill! Oh, er, and don't forget the hostages...



• Kill kill kill! Oh, er, and don't forget the hostages...

# 50 BEST GAMES OF THE YEAR: Part 2



humans play at once as well as adding other bells and whistles to the original concept.

*Bloodwyck* is pretty well unique. Possessing unrivalled immediacy and realism for a role-playing game, it provides a huge challenge for determined adventurers. Good one, Image Works.

Yes, it's part 2 of Amstrad Action's huge end-of-year retrospective. What are the 50 best games of 1990? ROD LAWTON concludes the round-up. This month: July to December...

## CONSOLE CLASSIC *Burnin' Rubber*

Ocean  
92%

"When you've finished admiring your new console and pretending it's something out of *Stingray*, you are ready to play *Burnin' Rubber*, the first ever Amstrad console game. Could this be the start of a new era of gaming?"

!

*Burnin' Rubber* is the free game supplied with the GX4000 console and Plus machines. But although it's free, that doesn't mean it's no good! In fact, *Burnin' Rubber* is the finest racing game ever seen on an Amstrad. You drive a le Mans car round a twisting, dipping circuit, through tunnels, past other cars... and end-over-end through the scenery, more than likely. There's nothing new in this game, just sheer speed, playability and graphic polish. Two things are truly spectacular. Your 16-colour hi-res hardware sprite, and the subtly shifting colours you race on



● *Burnin' Rubber* – the best driving game yet?

through the dusk and into the night.

So if it's so good, why only (!) 92%? Well, *Burnin' Rubber* does get gradually tougher as you go on, but basically very little happens. You crash or you keep going, that's all there is to it. Nigel Mansell can go home from Monaco after two hours, Derek Bell can leave le Mans after twenty-four, but a really hot *Burnin' Rubber* racer could go on indefinitely...

!

AA60

"Monty games haven't changed. They've been given a shot in the arm but the format has been mined to exhaustion in previous versions."

Harsh words indeed, especially since *Impossamole* was actually quite a good arcade platform puzzler. In it, our furry friend had to find and destroy five tough Guardians on five equally tough worlds. The action didn't go down too well at the time, the supremely frustrating *Impossamole* being rated a lowly 66%.

But what do we think now? *Impossamole* isn't as good as *Rick Dangerous II*, but it's perilously close to a Rave...

## *Impossamole* Gremlin

66%

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But what do we think now? *Impossamole* isn't as good as *Rick Dangerous II*, but it's perilously close to a Rave...

## *Klax* *Domark*

89%

"...Terminal mindbending is the outcome, as is complete and total addiction. If you ever manage to score a *Klax* your life will never be the same again, the game quickly becomes an obsession."

*Klax* followed in the *Tetris* vein, that of using a very simple principle coupled with arcade-style reactions to provide a stupidly addictive little game. In *Klax*, variously-coloured tiles flip towards you down a table and you have to collect them (up to five at a time) on a paddle and then drop them into a pit so as to form horizontal, vertical or diagonal lines of the same colour. These tiles then disappear. Each successive level poses a different, tougher challenge, and you could be playing – and swearing at – this one for months.

We game *Klax* 89% originally, but in all conscience it has to be worth a Mastergame.

## *AMC* *Dinamic*

83%

"With nine hits before you die and five lives, it looks as if *Dinamic* has finally got the difficulty level right. *AMC* is easy enough for the beginner to start while being hard enough to test the best at the finish."

**SUPER SKI**

**FIGHTER BOMBER**

**PRO TENNIS TOUR**

**CHALLENGERS!**

**KICK OFF**

**STUNT CAR RACER**

**SET OF SIMULATIONS all versions.**

Achieve excellence with this superb set that combines the greatest SIMULATION HITS !

CHALLENGERS ! Definitely RESERVED FOR THE BEST !

AMIGA, IBM PC and compatibles, COMMODORE 64, SPECTRUM and AMSTRAD CPC. Note 1 ! *KICK OFF* is not available in the PC version. Note 2 ! In the SPECTRUM version *STUNT CAR RACER* and *SUPERSKI* are replaced by *CARRIER COMMAND*, P47 and *RICK DANGEROUS*.

UBI SOFT Entertainment Software

AMSTRAD ACTION 19



## FEATURE

Another walking, stalking death-dealing scroller, *Astro-Marine Corps* is also yet another tough, good-looking blast from Spain. Eight levels, collectable weapons and large, impressive foes all go together in a well planned and well constructed game. And that's about it, basically.

*AMC* got a Rave back in AA58, and it looks just as good now.

### Fighter Bomber Activision

**89%** **AA59**

"Happiness is a laser-locked target. Fear is a locked SAM. Trouble is they tend to coincide. *Fighter Bomber* gives desktop pilots a taste of both with an adventure in techno-war..."



• *Fighter Bomber* mixed flight sim accuracy with arcade action.

The trouble with most flight sims is that they're dull. The trouble with most airborne arcade games is that they're simplistic. *Fighter Bomber* attempts to combine the best features of both.

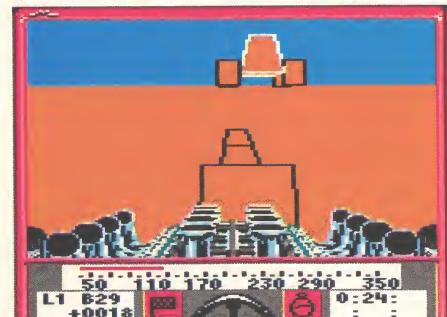
The only thing that stopped it scoring a Mastergame was the limited number of missions, and the fact that novice pilots might never persevere long enough to become aces.

### Stunt Car Racer Micro Style

**96%** **AA59**

"*Stunt Car Racer* is simply the best. Drive baby drive, put that pedal to the floor and go crazy. Why? Because you have to be slightly touched to even consider taking on this crowd of speed nutters..."

*Stunt Car Racer* made even the formidable *Hard Drivin'* look as if it was standing still. Using similar techniques – honest, straightforward, no-cheatin' 3D graphics – *Stunt Car* economised on on-screen detail but made up



• *Stunt Car Racer* – minimum graphics, maximum thrills!

for it in speed and playability. You race around a series of stunt tracks that make roller coasters look like a pram ride in the park, competing against opponents even crazier than you are...

We must have thought it was good – we gave it a massive 96% back then! Worth it for its playability and speed, but we're not so sure about the graphics any more. They really were on the thin side of non-existent.

### Escape from the Planet of the Robot Monsters Domark

**78%** **AA59**

"Overall, *Escape from the Planet of the Robot Monsters* is a polished and entertaining game. The one-player mode is good, but the simultaneous two-player option will make for many a long hour of happy blasting."

This game harks back to all those isometric 3D epics of yesteryear in its style. Your job is to rescue a bevy of beautiful female hostages from swarms of evil robotic guardians in a multi-screen bash-em-up. Graphics are thoroughly up to date, and a two-player option does more than simply double the fun.

We rated this one just below a Rave, but we think we were a little cruel – it really is good enough to deserve that rare accolade.

the game and further out of Hell. If you're looking for one of the stiffest arcade challenges ever, *Deliverance* is the answer. It's a hard one, but beatable, eventually."

Raff Cecco is one of the industry's legendary programmers. His distinctive graphics have ensured him a cult following on the CPC,



• *Deliverance* was great-looking but oh so tough.

and *Deliverance (Stormlord II)* is his best yet. It's a platform shoot-em-up which needs ultra-fast reflexes, rapid tactical thinking and almost inhuman perseverance. Very tough indeed.

*Deliverance* scored 89% – almost a Mastergame. Despite the polish and the graphic excellence, it loses out on sheer difficulty

### International 3D Tennis Palace

**81%** **AA59**

"...the emphasis heavily on tennis first, the 3D second and the international bit following up way behind."

The first time you see *3D Tennis* you're going to think it's somebody's idea of a joke. Drawn in sketchy vector graphics, it looks like an abortive Speccy game of the early '80s. Such is the price, however, of genuine – and fast – 3D. Palace has bravely gone for the real approach versus the pretty one, and come up with a tennis sim like no other. Play it long enough and you'll realise that this is serious stuff, a program that makes other tennis sims look like candyfloss.

But what do we think of it now? Well, it scored 81% at the time – those graphics really are off-putting – but if you're talking serious tennis it's got to be the one.

### Monty Python's Flying Circus Virgin

**84%** **AA61**

"Yes, it's time to don your silly hat, lock the door and put down that Cabinet Minister: you're about to enter an extremely surreal world..."

We gave *Lords of Chaos* 84%. Without *Laser Squad*, though, it would probably have scored a Mastergame...

How on earth can you make a computer game out of a phenomenon like the anarchic, disjointed and basically nonsensical Monty Python? Well Virgin has tried, and come up with a rather good game. It's basically a shoot-and-collect-em-up populated by large numbers of Python favourites. Your hero is Mr Gumby, who is out to reassemble his brain so that he

• *Lords of Chaos* was *Laser Squad* with magic.

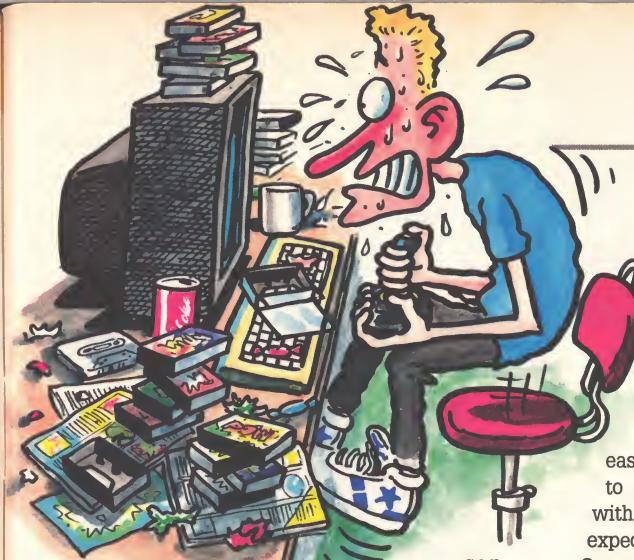
*LOC* is a role-playing game with excellent seen-from-above graphics and enough gameplay to last you a lifetime. Each character moves individually and possesses his or her own characteristics. The trouble is, how could it follow *Laser Squad*? The last thing it needed was more gameplay...

We gave *Lords of Chaos* 84%. Without *Laser Squad*, though, it would probably have scored a Mastergame...

### Deliverance Hewson

**89%** **AA59**

"With perseverance it's possible to progress, each time getting a screen or two deeper into



game rates very highly. Just be careful that Old Nick doesn't get you..."

As is usual with Dinamic games, *Satan* comes in two halves. Complete the first and you get the password for the second. The idea is that once you've got that far, there's no need for you to have to play the (by now) easy first level again. What more is there to say? A tough platform shoot-em-up with great graphics, as we have come to expect from this Spanish software house.

Our rating was 83%, making *Satan* a Rave. Fair enough, really, because although the game was about as well done as it could be, that style of game has been pretty well done to death by now.

### Night Hunter Ubi Soft

**73%** **AA61**

"Arcade game standard it ain't, but if you like the idea of a nicely-drawn, atmospheric romp around a big castle, with a bit of thought and a bit of difficulty, give *Night Hunter* grave consideration..."



• *Monty Python* had you collecting tins of spam...

### Iron Lord Ubi Soft

**92%** **AA61**

"...it stands head and shoulders above the others in the genre. It is fun to play, and wonderful to look at. There is enough here to satisfy the most demanding adventurer..."

*Iron Lord* seems to have been around on the other formats for ages, but has only recently made it to the CPC. To describe it as a graphic adventure/role-playing game would be not to do it justice. Your job is to regain the throne of your kingdom by amassing an army from your land's citizens and leading it against the evil usurper. There are archery matches to win, arm-wrestling and gambling, heroes, villains, battles and everything else you could wish for in a medieval epic.

We gave it a Mastergame, and in its field there's no doubt that there's simply nothing to touch it. A whole world crammed into two disks (yup, it's that big).

### Satan Dinamic

**83%** **AA61**

"Excellent graphics and oodles of playability. Not much variety, but the range of hazards on successive levels added to the sheer fun factor makes up for all that."

*Skate Wars* is a kind of ultra-violent ice-

## FEATURE



football. The players are encased in spiked steel armour and the ball itself is solid steel. The niceties of tackling are limited to smashing into your opponent hard enough to send him flying, and hazard include concrete mushrooms and bottomless pits

*Skate Wars* scored 80% originally, let down principally by its lack of depth – there are many different rinks, but still the same side-to-side kicking/running/crashing. Having said that, the graphics really are nice and the game so playable that two human opponents could be arguing over it for months.

### PLATFORM PERFECTION

#### Rick Dangerous II Micro Style

**97%** **AA62**

"The graphics are a bit blocky, and the game style itself is distinctly old. But the whole thing is done just brilliantly. No question about it – an instant Mastergame!"

*Rick Dangerous II* follows on the heels of its predecessor, a simple platform/ladders/traps puzzling and exploration game with plenty of arcade action. Nothing new at all, but wonderfully executed. *RDII* has even more and better gameplay and a unique game structure that lets you play four of the five levels at will – each of which is a game in itself. And the fifth level? You can only get to it by doing the other four consecutively.

Wow – 97% is a lot to give any game. Does *Rick II* deserve it? Well, we have to say, now that we've had a chance to sit back and look at the thing objectively... well, yes dammit, it does!



• *Rick Dangerous II* was simply the best.

### Fire & Forget II Titus

**AA61**

"The only thing left to worry about is the price. Nearly £30 is one hell of a lot compared to the traditional £15 or so of traditional disk-based CPC software."

*Fire & Forget II* is a cross between a racing game and a *Thunderblade*-style shoot-em-up. Your vehicle – a Thunder Master II no less –



## FEATURE

can either scoot along the road dwindling towards its vanishing-point on the horizon, or take to the air to attack its foes. You're following a convoy of terrorists on its way to wreck an international peace conference, by the way.

What you've got to ask yourself with a console game is whether it adds enough to the state-of-the-art of CPC gaming to double the price of the software. *Fire & Forget II* would be stunning on the CPC, but for a new generation of games it falls a little way short. It's good, but not that good.

### Sim City Infogrames

**82%** AA63  
"...a city simulator. Now that may sound like a bit of a daft idea for a game, but just wait 'till you sit down to play it!"

*Sim City* gives you a large, undeveloped landscape, a whole wedge of money, and the



● Building your own metropolis in *Sim City*.

ability to designate commercial, residential and industrial zones, build roads and railways and erect power stations, sports stadiums, ports and airports. Construct a city so wonderful that everyone wants to go and live there – but remember, people don't like pollution from factories, expensive housing or traffic jams, as well as being generally rather finicky...

Very good, but not quite a Mastergame. *Sim City* is endlessly fascinating, but a little sluggish to play and graphically dodgy.

### Italy 1990 US Gold

**88%** AA58  
"As time ticks on in the World Cup 1990 competition, the Goldies have beaten the offside trap and seem certain to score a winner!"

Yet another World Cup tie-in, *Italy 1990* proved very good-looking and exceptionally playable. Too easy against the computer, but with two humans it was terrific fun.

There were loads of new footie games in 1990, but none which combined both graphics and playability like *Italy 1990*.

### Time Machine Activision

**76%** AA62  
"This form of time travel can get very frustrating as you puzzle your life away, but if you're



● *Time Machine* – 3D graphics, 4D gameplay...

which could be called graphics. *Kick Off II* remedies this in great style, as well as adding new features to boost the gameplay even further.

We liked it so much we gave it 86%. Not quite polished enough for a Mastergame, but probably the year's most playable footie sim.

### CLASSY CONVERSION

#### Shadow of the Beast Gremlin

**84%** AA63

"*Shadow of the Beast* is a game we thought we'd never seen on the Amstrad."

There are several levels to explore in this horizontally-scrolling bash-em-up that set the world buzzing with its graphics on the Amiga. With beasties to bash, objects to collect and end-of-level guardians to destroy. The four-colour graphics are detailed and effective, and the gameplay easy enough at the start and tough enough at the end – it's what counts.

The major quibble was the restart point once you were dead – right back at the blinkin' start! That stopped it getting a Mastergame in AA62 and it still hacks us off now. Otherwise, a great conversion.



● *Shadow of the Beast*

### Puzznic

**Ocean**  
**84%** AA62

"*Puzznic* is one of those games based on a very simple idea. Appearances are (as ever) deceptive, though, and underneath it all there's oodles of mega addictive gameplay. You'll be unable to put it down until you've finished."

*Ocean* has come up with another puzzle game, this time shuffling coloured tiles around until you can get them next to each other so that they disappear. Walls, lifts and all sorts of different layouts over eight large levels will keep you puzzling for ages.

There's enough gameplay to justify its 84% Rave rating at the time, but not enough arcade immediacy to make it a Mastergame.



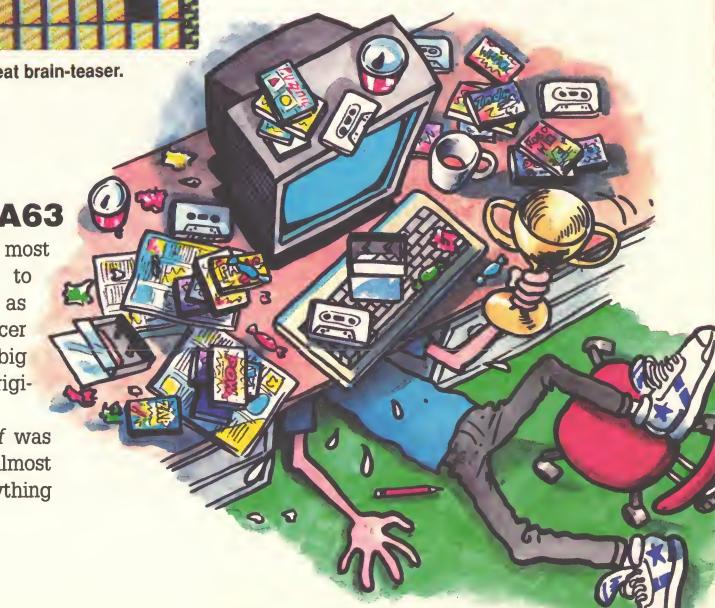
● *Ocean's Puzznic* was a great brain-teaser.

### Kick Off II Anco

**86%** AA63

"*Kick Off II* is simply the most playable footie game to date. While it's still not as polished as other soccer games, it represents a big improvement over the original version."

The original *Kick Off* was fast and playable, but almost entirely devoid of anything



# THE BEST GAMES OF 1990: READERS' VOTING FORM

<input type="checkbox"/> 1	Rick Dangerous II .....	Micro Style .....	97%	AA62
<input type="checkbox"/> 2	Stunt Car Racer .....	Micro Style .....	96%	AA59
<input type="checkbox"/> 3	Myth .....	System 3 .....	94%	AA55
<input type="checkbox"/> 4	Ghostbusters II .....	Activision .....	94%	AA52
<input type="checkbox"/> 5	Burnin' Rubber .....	Ocean .....	92%	AA60
<input type="checkbox"/> 6	E-Motion .....	US Gold .....	92%	AA57
<input type="checkbox"/> 7	Iron Lord .....	Ubi Soft .....	92%	AA61
<input type="checkbox"/> 8	Bloodwyrm .....	Image Works .....	92%	AA58
<input type="checkbox"/> 9	Castle Master .....	Domark/Incentive .....	91%	AA56
<input type="checkbox"/> 10	Turrican .....	Rainbow Arts .....	90%	AA57
<input type="checkbox"/> 11	Chase HQ .....	Ocean .....	90%	AA54
<input type="checkbox"/> 12	The Untouchables .....	Ocean .....	90%	AA53
<input type="checkbox"/> 13	Jack Nicklaus Golf .....	Accolade .....	89%	AA53
<input type="checkbox"/> 14	Klax .....	Domark .....	89%	AA58
<input type="checkbox"/> 15	Fighter Bomber .....	Activision .....	89%	AA59
<input type="checkbox"/> 16	Fantasy World Dizzy .....	Codemasters .....	89%	AA52
<input type="checkbox"/> 17	Operation Thunderbolt .....	Ocean .....	89%	AA52
<input type="checkbox"/> 18	P-47 Thunderbolt .....	Firebird .....	89%	AA54
<input type="checkbox"/> 19	Deliverance .....	Hewson .....	89%	AA59
<input type="checkbox"/> 20	Italy 1990 .....	US Gold .....	88%	AA58
<input type="checkbox"/> 21	Pipe Mania .....	Empire .....	88%	AA57
<input type="checkbox"/> 22	Rainbow Islands .....	Ocean .....	88%	AA55
<input type="checkbox"/> 23	Fiendish Freddy .....	Mindscape .....	88%	AA55
<input type="checkbox"/> 24	Kick Off II .....	Anco .....	86%	AA63
<input type="checkbox"/> 25	Puffy's Saga .....	Ubi Soft .....	85%	AA56
<input type="checkbox"/> 26	Lords of Chaos .....	Bladesoft .....	84%	AA59
<input type="checkbox"/> 27	Shadow of the Beast .....	Gremlin .....	84%	AA63
<input type="checkbox"/> 28	Puzznic .....	Ocean .....	84%	AA62
<input type="checkbox"/> 29	Monty Python's Flying Circus .....	Virgin .....	84%	AA61
<input type="checkbox"/> 30	Fire & Forget II .....	Titus .....	84%	AA61
<input type="checkbox"/> 31	AMC .....	Dinamic .....	83%	AA58
<input type="checkbox"/> 32	Satan .....	Dinamic .....	83%	AA61
<input type="checkbox"/> 33	Sim City .....	Infogrames .....	82%	AA63
<input type="checkbox"/> 34	World Cup Soccer – Italia '90 .....	Virgin .....	81%	AA57
<input type="checkbox"/> 35	International 3D Tennis .....	Palace .....	81%	AA59
<input type="checkbox"/> 36	After the War .....	Dinamic .....	81%	AA52
<input type="checkbox"/> 37	X-Out .....	Rainbow Arts .....	86%	AA56
<input type="checkbox"/> 38	Hard Drivin' .....	Domark .....	80%	AA53
<input type="checkbox"/> 39	Skate Wars .....	Ubi Soft .....	80%	AA61
<input type="checkbox"/> 40	Dr Doom's Revenge .....	Empire .....	80%	AA56
<input type="checkbox"/> 41	Dan Dare III .....	Virgin .....	79%	AA53
<input type="checkbox"/> 42	Escape from the Planet of the Robot Monsters .....	Domark .....	78%	AA59
<input type="checkbox"/> 43	Kick Off .....	Anco .....	78%	AA55
<input type="checkbox"/> 44	Oriental Games .....	Firebird .....	78%	AA56
<input type="checkbox"/> 45	Moonwalker .....	US Gold .....	78%	AA52
<input type="checkbox"/> 46	Time Machine .....	Activision .....	76%	AA62
<input type="checkbox"/> 47	Night Hunter .....	Ubi Soft .....	73%	AA61
<input type="checkbox"/> 48	Pro Tennis Tour .....	Ubi Soft .....	72%	AA53
<input type="checkbox"/> 49	Lost Caves .....	Players .....	71%	AA52
<input type="checkbox"/> 50	Impossamole .....	Gremlin .....	66%	AA58

? Other (please quote game name)

OK, you've read our ramblings about the best releases of the past year – but what do you think? We're conducting a reader poll whereby each one of you can vote for your fave of 1990. Simply complete the form below and return it to us by February 28th, and we will compile the definitive readers' chart of 1990. So what are you waiting for? – send it in!

Opposite are the top 50 games of 1990, chosen by the AA end-of-year committee and arranged in order of their original scores. What we want you to do is choose your own favourite out of those listed and put a tick in the box next to it. At the end of February we will be getting all the returned forms together and compiling the definitive games chart of 1990. Done that? OK, now cut out this form (a photocopy will do) and send it off to:

**AMSTRAD ACTION READERS' CHART, AMSTRAD ACTION, BEAUFORD COURT, 30 MOUTH STREET, BATH, AVON BA1 2BW**

Don't forget, we want these coupons in by the end of February. And as a little inducement to you all, ten readers will be chosen at random and sent a special mystery gift for their troubles...

If you want the chance to win this freebie, just jot down your name and address here:

Name .....

Address .....

● Please choose one game only, because if you start picking your top fives we're not going to know our ?'ies from our elbows...

# Forum

**Professor Waring wades through another sackful of techie troubles...**

Troubled by technology? Baffled by the basics? Have you got a problem or question that you just can't find the answer to elsewhere? Perhaps you have a tip that other readers will find immensely useful. Forum is the place where those problems get solved, those questions get answered, and those tips are passed on. Write to Forum, Amstrad Action, Future

## ● Copy Cat

Help! I've been trying to write a machine code routine for a program that I've been working on. I want to copy a screen from one place to another, the problem is that my routine is just not fast enough. It has to happen within one screen refresh. (It's for a game I'm trying to write, and at the moment it flickers like crazy.)

My routine goes like this:

```
LD HL,&8000
LD DE,&C000
LD BC,&4000
LD IR
```

I've tried variations to make it quicker, but nothing I do seems to make much difference. I do hope that there is a way - I'm tearing all my hair out!

Jack Spanney  
York

Actually, Jack, the quickest way to copy the

Publishing, Beauford Court, 30  
Monmouth Street, Bath BA1 2BW.

All technical queries should be sent to this address. Due to the pressures of producing the best mag around, we are unfortunately unable to answer telephone enquiries. For the same reasons, we cannot enter into any personal correspondence. Don't enclose SAEs with

screen memory is not to copy it at all! Instead you use a technique that has the appearance copying the memory, but in reality it does no such thing.

The screen memory is simply a bank of normal RAM. There is a video chip that converts the RAM into a picture. This can be programmed to read the screen from different memory locations, either at &0000, &4000, &8000, or the default address, &C000. These are changed by altering the HD6845 chip's start address registers:

```
LD BC,&BC00
OUT (C),C
LD BC,&BD00 ;xx=&00,&40,&80,&C0 depending
              on RAM page
OUT (C),C
```

In BASIC try this to simulate it:

```
10 OUT &C000,&C:OUT &D000,0
20 IF INKEY$="" THEN 20
```

your letters - they'll end up in the bin.

We try and answer as many letters as possible every month but because of the sheer volume of letters we get, we cannot guarantee to print every letter we receive. Rest assured that all your letters are read, and we select those to try and encompass as wide a variety of topics as possible...

30 OUT &BC00,&C:OUT &BD00,&C0

Note that this doesn't physically move the contents of the screen at all. It merely switches whereabouts the video is read from. It's commonly used by games programmers in a technique called 'flipping'.

Two screens are used. One screen is built up whilst the other is being displayed. When the computer has finished drawing up the hidden screen, they are 'flipped' using the above machine code routine. The hidden screen becomes the displayed screen. The old displayed screen is cleared, and the next screen is built up. This process is repeated many times a second, and results in smooth update of computer screens.

The advantage of this method is that the screen appears to redraw instantaneously. Only a couple of instructions are involved, and the effect is smooth, flicker-free animation. The disadvantage is that it requires huge amounts of memory - two 16K screens, that's half the computer's memory.

I hope you haven't lost too much hair.

## ● Give us a poke...

I have just bought an Amstrad CPC 464, and although I have read the manual provided, am not much wiser. At the moment I am just using it for games so I started buying your magazine for help, tips etc.

Unhappily, I do not understand how to put in the cheats, pokes etc, this is very frustrating, could you please print a "thickies" guide to using them.

I'm sure I cannot be the only new reader with this problem. In time I'm hoping to become more knowledgeable in these matters, but in the meantime, could use some help.

I do not want to resort to "blackmail", but how can I keep buying your mag if I don't understand it!

P.S. Your mag is brilliant, and I do enjoy

reading the letters. (Those that I can understand anyway!)

Marie Butler  
Chesterfield  
Derbyshire

We have recently started a beginners' section, just for people like you. Our new columnist **Alex van Damm** will answer all your queries about anything you're not sure about in her Ask Alex section. There's no need to feel daft, Alex was a beginner too once (Of course, I never was), and will treat all letters seriously, no matter how trivial they may seem.

I have passed your letter on to her. Hopefully she'll be tackling the prickly subject of pokes in this, or a forthcoming issue.

P.S. Your mag is brilliant, and I do enjoy

Here is a simple listing to illustrate how it's done. It's a bit flickery and blocky, but you should get the idea.

```
S MODE 1
10 x=10:y=10:xdir=1:ydir=1:REM Set the co-ordinates
   and directions.
20 LOCATE x,y:PRINT " ":REM Erase the old ball.
30 x=x+xdir:IF x>38 OR x<2 THEN xdir=-xdir:REM Move
   the ball left/right. Swap direction if it exceeds
   boundaries.
40 y=y+ydir:IF y>22 OR y<2 THEN ydir=-ydir:REM Move
   the ball up/down. Swap direction if it exceeds
   boundaries.
50 LOCATE x,y:PRINT "O":REM Print that ball.
60 GOTO 20
```

As for your poke request, you'll have to scan Uncle Phil's Cheat Mode pages, and keep your fingers crossed.

## ● Scull and crossbones

I am writing in reference to a letter you carried in AA61 by G A Doyle. In this letter, Mr/Mrs Doyle stated that I was a beginner in the Public Domain business and that I was indulging in 'Secondary Piracy' because I was asking for some PD software in Helpline.

Although I have not been going as long as WACCI, I am not a beginner. In fact, my library has over 80 PD disks, that's more than any other library in the U.K.

Since the programs I asked for are PD, it is not a form of piracy for myself to copy programs from other libraries. Indeed, I have had other PD libraries ordering software from myself, without which, some of them would probably not have started. Also I would like to point out that my PD library was the first to get permission to distribute the *Total Eclipse Trainer Demo*, and since then, other libraries have followed my lead in using the program. So, I would consider them ripping me off on that respect.

Thank you for the taking the time to read this letter and allowing me to defend my PD library.

Alan Scully  
Glasgow

Once a piece of software has been donated to the Public Domain anyone is at liberty to pass on a copy to anybody else.

Anyone who runs a library is perfectly entitled to charge a small fee for copying and distributing that software. The prices that PD libraries charge is on the whole barely enough to cover their costs. The time and effort that most librarians put in to the running of their library is enormous.

Alan's library can be contacted at **Scull PD**, 119 Laurel Drive, Greenhills, East Kilbride, Glasgow G75 9JG.

## ● Grubby heads?

I have a CPC464, and not many tapes work in it now, we can't work out why. Sometimes a game will load with no trouble, other times the title screen will change colour and then halfway through a block of tape stops and

## ● Presentation is everything

At the moment, and for next two years, I will be doing a BTEC National Diploma in Computer Studies. Just recently I have found out that a large percentage of the marks come from presentation. I have terrible writing (as you can probably see) and I am worried that I may lose marks because of this (enough of the chit-chat). What I am saying is could you give me advice for a printer that is cheap, has good NLQ, plenty of fonts,



● What's the best printer on a shoestring?

you should be able to get it cheaper via mail order. You could improve your presentation even more by going for the LC200 colour option at an official price of £259, again shopping around should enable you to buy it for less. Speak to Star Micronics on 0494 471111.

I think you might be going for overkill with the desktop publishing package. They're more suited to producing newsletters and the like, rather

than college work. They can do fancy things, but it will take ages for them to print out your work.

I think you're better off with a straightforward word processing package such as Brunword or Protext. Brunword includes a spell checker as part of the package, and Protext has one as an optional extra.

Contact **Brunning Software**, 34 Helston Road, Chelmsford, Essex CM1 5JF. Telephone 0245 252854. Or **Arnor** 611 Lincoln Road, Peterborough PE1 3HA. Telephone 0733 68909.

Just for you, Matthew, Forum's address appears at the top of the column.

The Star LC10 should meet with all your requirements. It has a list price of £199, but

resets the computer.

Yesterday I tried your cover tape game Ironman and it had a 'read error b' in the same place four times. I called my dad over to watch and then it loaded perfectly! I have thought that the tape heads might need adjusting. I have seen head alignment kits occasionally but not recently. Do you know where to get an alignment kit, or somewhere where this could be done cheaply? If the heads are OK, what else could be wrong with our 464? If you could give me any help I would be very grateful.

There are plans in our house of getting a DD1, and Multiface II, but we need the tape to transfer games to disk (NOT LEND OR SELL), only for disk back-up. Is backing up of commercial games OK?

Thanks for any help.

David Overall  
Streatham  
London

the software houses are far more concerned about piracy than worrying whether you make the odd back-up.

## ● Idle thoughts

An idle thought. Why didn't the Amstrad research and development people include a word processing chip in the new 6128? Or at least space to add, say, Protext and Prosell inside the machine so it doesn't end up looking like a Christmas Tree?

David O'Dell  
Worthing  
West Sussex

The cartridges that the new machines use normal ROMs inside. There is no reason why a word processor cannot be blown onto the ROM and supplied on cartridge form.

However it may be that serious manufacturer's feel that the large number of units that have to be manufactured makes the proposal unfeasible.

## ● On the level

I have, for several aeons now, used my 6128 and the excellent Mini Office 2 package for my word processing needs, particularly for school projects and letter writing. It has served me



very well indeed, but now I have dragged myself another rung up the ladder to do A-levels I find myself in need of something a bit better. What I really want is a word processor that will exploit more of the printing capabilities of my DMP2000, such as subscript, italics and underlined printing. I've heard that *BrunWord Elite* is pretty good, but have you any other suggestions?

Another program I need is one that draws and prints mathematical graphs, where you can type in an equation and it does the rest. Up till now I've been using one called *Omnigraph* on the RM Nimbus machines at school. Again, any suggestions?

Finally, many are the evenings when my *Bubble Bobble* tape has failed to load, and unfortunately it doesn't seem to like the Multiface 2. Does anyone know where I can get a disk copy? I hunt through AA every month but to no avail (whereupon I lapse in uncontrollable sobbing).

Anyway, congrats on the storming mag, here's hoping for some answers.

Russell Doano  
Gwent

**Brunword** should be perfectly adequate for your needs. It has a variety of fonts, and is specially designed to work with dot matrix printers.

As for *Omnigraph*, I'm afraid my software collection doesn't run to that. We did print a similar thing in Type-Ins recently, for solving quadratic equations. Probably nothing like what you had in mind. If anyone is familiar with such a maths program then get in touch.

## ● Eight-inch disk

Please can you help? I wish to know where I can get hold of an eight-inch disk drive, interface for connecting to 6128, and O/S of suitable quality and also how much this lot will cost.

And now a note for any budding ornithologists out there. I have written a BASIC program which translates English names of British into their Latin equivalents. It contains over 500 different species and is fairly fast considering it is only in BASIC. It is disk-only, so if you want a copy, just send a blank disk and SAE to me and you will receive a copy pronto!

Just one more point... Why is it so difficult to get a letter printed? I have lost count of the amount of times I've written and this is probably my last desperate attempt before I finally give up. Great mag though!

Lorne Murphy  
35 Longridge Ave  
Saltdean  
Brighton  
BN2 8LG

What on earth do you want an eight-inch disk drive for (apart from impressing the girlies)? No... I won't ask. If anybody has actually done such a thing then get in touch, please...

Similarly, if you're into birds, send a disk and stamped address envelope to Lorne.

What do you mean you never get your letters printed? You just did, didn't you?

## ● Mouse training

For those who own a Kempston mouse and have been baffled by the instruction sheet (I wonder if they wrote the Amstrad manual?), I have managed to uncover the port addresses where the x and y co-ordinates are stored and may be accessed. Type:

PRINT INP (&FBEE)\*638/255 to view the x co-ordinate of the mouse cursor

PRINT INP (&FBEE)\*398/255 to view the y co-ordinate of the mouse cursor

PRINT INP (&FAE7) to view the state of either mouse button.

Note that only numbers in the range 0 to 255 can be stored at these locations, therefore both the x and y co-ordinates must be magnified to cover the entire screen. The port location &FAE7, used to detect the state of the mouse buttons, returns the value 124 when both buttons are pressed simultaneously, 125 when the left button is pressed, 126 when the right button is pressed, and 127 when neither button is pressed.

The following short listing demonstrates how the Kempston mouse may be implemented into your own programs:

```
1' DRAWING UTILITY for Kempston Mouse
2' Written by Matthew Prescott
3' 1998
10 MODE 1
20 BORDER 2
30 INK 0,0
40 INK 1,26
50 INK 2,2
60 INK 3,2
70 TAG
80 SYMBOL 268, &7F,&3F, &1F,&3F, &7F,&FF, &1F, &68
90 DEF FNX=INP (&FBEE)*638/255
100 DEF FNY=INP (&FBEE)*398/255
110 DEF FNZ=INP (&FAE7)
120 X+FNX
130 Y+FNY
140 GOSUB 310
```

150 IF FNZ<>127 THEN 180

160 IF FNX<>0 OR FNY<>0 THEN 260

170 GOTO 150

180 GOSUB 310

190 GOTO 240

200 X+FNX

210 Y+FNY

220 IF FNZ<>127 THEN 240 ELSE 120

230 X+FNX

240 DRAW X+16,Y+1,1,0

250 GOTO 260

260 GOSUB 310

270 X+FNX

280 Y+FNY

290 GOSUB 310

300 GOTO 150

310 MOVE X,Y,2,1

320 PRINT CHR\$ (255)

330 RETURN

Moving the mouse with neither button depressed will move the arrow cursor. Pressing and holding a button will cause the arrow to disappear and, when the mouse is moved, a line to be drawn. Beware that crossing the highlighted border whilst holding a button will prompt undesirable effects. You may move the mouse at any speed, the line will not break. This is a small section of an art package I have written for the Kempston mouse. I have written several other utilities, including a mouse-driven filing system. The best art package available for the Kempston mouse is the *Advanced OCP Art Studio*, which allows you to select the mouse from the input devices menu (see the manual). If you own a Kempston mouse (indeed, any mouse), this package is an essential.

Matthew Prescott  
Australia

G'day Matt, and cheers for those hints, mate. Bonza. (Australian for thank you.)

## ● Interface for disk drive

I recently bought an FD-1 Disk drive as my first disk drive for my 464. I bought it because it was selling for only £15. I am now stuck, I can't seem to find anywhere where I can buy the interface to connect the FD-1 to my computer. Could you please tell me how I could get hold of one.

If anybody out there is willing to sell me one at a reasonable price, I'll be most grateful.

Duwayne Brooks  
77 Wydeville Manor Road  
Grove Park  
London SE12 0EP

What on earth do you want an eight-inch disk drive for (apart from impressing the girlies)? No... I won't ask. If anybody has actually done such a thing then get in touch, please...

Similarly, if you're into birds, send a disk and stamped address envelope to Lorne.

What do you mean you never get your letters printed? You just did, didn't you?

the games files. I have tried to remove the system status and revert the files to directory status using the SET command from CP/M.

With the CP/M disk in the drive (I have a 6128) and typing SET at the A> prompt results in an **ERROR: NO OPTIONS SPECIFIED** message. With the games disk in the drive typing the command results in **SET?**

I cannot copy the **SET.COM** file to the games disk as it is not system format, or the games disk back to the CP/M disk as they are system files only. I have tried help on side 3 of the operating system disks, and have been through the manual from front to back. Please help before I give up and go fishing!

Steve Makin  
Dover  
Kent

You need to make the **SET** command wait until you've put the games disk into the drive before executing the command, Steve.

To do this you need to insert a B: between the command and the parameters. On a single-drive machine this will prompt you to insert another disk in the drive before commencing the operation.

Go into CPM and type:

SET B:/\* [dir]

You will be asked to put in another disk. Insert the games disk, and sit back while all your files are converted. All you need to do now is erase the ones you no longer require.

## ● Power down

I have a major problem concerning my upgraded CPC464. A few years ago it was sent away to a repair company. Now I am having major problems getting any power to the computer.

The five volt DC input socket appears to be loose. A pencil wedged between the 5 volt plug and the monitor lead lets the power through, but one small bang on the table shifts the cable and the ON lamp goes off. I then have to spend several minutes fiddling with the pencil and the wire to get it working again.

As I thought the problem was in the computer, I took off the cover and examined the rear connections. On the bottom of the PCB one of the solder joints leading to the socket was cracked. I re-soldered it, and set the computer up again. Nothing happened, so I spent some more time at it. I have to use the pencil still.

I tested the plug by using an alternative

## ● Thank you very much

I would like to thank Chris Medway and Val Robinson for their suggested solutions to my problem, in issues 58 and 61. I now have my Amstrad and Printer working in beautiful unison and have produced many more pages to add to my increasing collection.

John Tucker  
Flitwick  
Bedfordshire

If it's a serious fault, it's likely that the drive may need to be replaced entirely. If that's the case, then CPC (no relation) will be able to supply you with one for £89.05. However, send your broken drive back to them, and they'll let you have it for £70.01.

You will need to fit the drive yourself, so if you're a ham-fisted oaf with the dexterity of a arthritic hippo, then I'd leave the soldering to somebody else.

Get in contact with the company before you send that international money order. The address is: CPC, 194-200 North Road, Preston, Lancashire PR1 1YP. Or why not run up an expensive international phone bill? Call them on 0772 555034.

## ● Improve your memory

I have recently taken over a CPC664 system from someone who has upgraded to a PC. To bring the 664 up to date, I need to expand it a little.

I understand your reluctance to publish hardware projects but, since I am an electronics technician, I am sure that I could build, and debug before connection, any add-on devices at a far lower cost than commercial gear. A good example is the local price of \$159 for a 64K memory expansion. I can buy two 4464 memory chips for just \$4.50 each. Total cost, if I construct it myself, should be under twenty dollars. (My spare time at no extra cost.) Also there is ample room to fit inside the case. (instant 6128!)

Given the age of the CPC machines, I believe there may be many readers with some technical knowledge, who have expanded the memory to 6128 size or bigger.

Colin Harvey  
Elwood  
Victoria  
Australia 3184

The reason we've steered clear of hardware projects in the past is not to do with the technical capabilities of our readers. It's the fact that if a mistake is made, it could result in lots of unhappy people with large repair bills. An error in a section like Type-Ins is annoying, but can easily be rectified in the next issue. Obviously the same cannot be said of a hardware project. However, we are considering introducing simple projects to see how it goes. If we can get together a failsafe system, then we may embark on some more ambitious projects. Anyway, for the time being, I have printed your address. Anybody who has built such a thing can get in contact with you.

## ● What's the difference?

I would like to know what the difference is between the cartridge bit in a Plus machine and the GX4000 console?

Chris Wheatherley  
South Harrow  
Middlesex

There's no difference at all. The cartridge games will run happily on all machines.

# Ask Alex



Hello again fellow Amstrad users! I'm back to set you straight on all those niggly little problems that have you all lost and bewildered!

This month I'll be talking about pokes. What are they, what do they do, and how do you use them? I'll also be talking about how to type listings in.

Up 'til now, all my post has arrived courtesy of Adam - he's given me letters that are more suited to my page, rather than Forum, which was where they were addressed. Now I don't mind answering these second-hand letters, but I'd love to have some of my own!

So c'mon! I haven't had a letter addressed to me yet! So get them sent in, I'm so looking forward to receiving them!

Alex

## Is your Amstrad IBM-compatible?

Bruce Sandeman has written in with a question about IBM compatibility.

"I would like to know if the 6128 is IBM compatible?" he asks.

I'm afraid the answer is a most definite No, Bruce. Sorry! IBM compatible means that the computer will run software, and connect to peripherals designed for the IBM PC computer. To do this they have to be virtually identical as the IBM - which is a boring old business machine. It's alright if you have a load of stuffy old accounts to sort out, but they're not nearly as much fun as a CPC, I can tell you!

The Amstrad is much more of an all round home machine. It's friendlier, you can learn to program it quite easily (it must be easy - I managed it!), and of course is miles more popular when it comes to games.

Bruce goes on to ask: "If it's not PC compatible, is it possible to connect a 3.5 inch disk

## Key Confusion

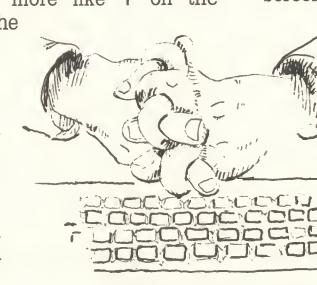
Mr B Becket from Kettlethorpe in West Yorkshire has written in about not being able to find certain keys that appear in listings. I hope you don't mind little me answering your questions rather than Adam! Anyway, he says that he cannot find the keys marked f0, f1, f2 and so on, the ^ also remains elusive, as does the | key.

I think that part confusion has come from the differences in the keyboard between the CPC6128 and the CPC464. (Both Plus machines share the same layout as the CPC6128.)

For a start the keys on the 6128's numeric keypad are prefixed with an 'f'. On the 464 they just have the numbers. Whenever you read that one of the 'f' keys is used to access a function, use the number keys at the right hand side of the keyboard.

The '^' key looks more like 't' on the Amstrad keyboard. The reason for the confusion is that different fonts display different symbols to represent the same character. Hmm, I think I'd better explain further...

AA use professional Desk Top Publishing



fully a big Yes! It's perfectly possible. You'll need to buy two items beforehand. A 3.5 inch disk drive (never!) and a utility to read and write to IBM format disks.

To make your shopping easier, I'm going to recommend one mail order firm who can supply both items to you. The PC transfer utility is unique to the supplier, but you'll be able to find 3.5 inch disk drives from various sources - take a look through the adverts in AA.

The program is called 2 in 1, and in a review published in AA a few months ago, came out tops as the best utility of its type. It costs £24.95. The disk drive costs £79.95 plus £3 carriage, so added together the total would be £106.90. Not too big a price to pay to keep you from working late at the office! Send your order to Microstyle, 212 Dudley Hill Road, Bradford, W Yorks BD2 3DF. You can ring them first on 0274 636652.

• No, the CPC is not IBM compatible. And a good thing too, we say!

drive, and save programs in IBM format?"

I think I know where you're coming from Bruce! I'll just bet that you use a PC at work, and want to carry on with your facts and figures at home. This time the answer is thank-



## Typing in programs...

Now you've got your shiny new computer, it might not be a bad idea to learn how to use it! Typing in printed programs is in fact quite easy...

A program is simply a list of instructions that tells your computer what to do. Because of this, programs are often referred to as listings. The computer doesn't understand these directly, though - it works in machine code, a horribly complicated language made up from numbers. To make things easier for the rest of us, easier 'languages' have been developed that both humans and computers can understand so that you and I can learn to put programs into the computer.

The Amstrad has a built-in language called BASIC. This stands for Beginners' All-purpose Symbolic Instruction Code. At the start of every line there's a number. This tells you whereabouts in the program that particular line sits. So, for example, line 10 goes before line 20. This means that if you want to insert a line in between two existing ones, you'd simply choose a line number in between. With the above example, adding line 15 would work.

To type in listings you don't actually have to understand what the instructions do! But you do have to make sure that they are typed in exactly, otherwise the computer won't be able to understand the instructions that you're giving it.

If you do make a mistake you can move the cursor (the square block where the letters appear as you type them) back and forth through the line with the cursor keys - those four keys with arrows on them. Note that you can still see the letters 'through' the cursor. Mistakes can 'rubbed out' using the CLR and DEL keys: CLR gets rid of the character directly below the cursor; DEL erases the character to the left.

You have to tell the computer when you've finished each line. To do this you press the RETURN or ENTER key. The computer will check to see whether you've put a line number at the beginning. If you have, it will be put into the correct place in the listing. If not the command will be acted upon immediately.

Apart from learning how to type your programs in, you'll need to know a few keywords that are connected with typing in listings. These don't have line numbers, because you want the computer to act straight away:

• When you've finished entering the listing, you may like to see what the program looks like. To do this just type LIST (followed by RETURN, remember!). Your program will appear on the screen, with the lines in their proper sequence.

• As I said before, listings need to be typed in accurately to work. The teeniest mistake will result in an error. If you spot a mistake in your listing you'll need to rectify it before it'll work. You could re-type the line all over again, but there is a much easier way. You can edit your work with the EDIT command. If the error is in

line 30 then just type EDIT 30 (don't forget that RETURN!) The troublesome line will appear with the cursor within it. Use the cursor keys and CLR and DEL to correct the line. Press RETURN when you're done.

- It's all very well having your little programme typed in, but it's not much use unless you know how to get the thing started! RUN starts the program.
- When you've got bored of the listing pressing ESC twice quits the current listing.

### Type-ins

If you don't understand BASIC, you won't be able to make your own programs! Instead you'll need to get your listings from somewhere else. Pages like Type-ins in Amstrad Action are ideal. These are programs that others have submitted to the magazine for publication.

It's probably a good idea to start with the smaller listings. The bigger ones can take hours to type in, and are prone to be full of mistakes! (Due to your typing by the way, not the above example, adding line 15 would work.)

To type in listings you don't actually have to understand what the instructions do! But you do have to make sure that they are typed in exactly, otherwise the computer won't be able to understand the instructions that you're giving it.

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because the magazine's at fault!)

The listings in Type-ins are presented in such a way to make them even easier to enter, with less possibility of mistakes. The first thing you'll notice is that before each line there's a strange code in brackets. DON'T type this in! This is a special reference number to help you make sure that they're typed in correctly. To use them you'll need a copy of Type-writer - a special AA program that is reprinted every now and again.

Don't worry. If you don't have Type-writer. Just ignore those codes. The other thing you'll notice is all the dots. You won't find them on your keyboard, so quit looking! These are used to represent spaces. Every time you come across a dot, replace it with a space instead (but don't confuse them with full stops!). I expect that you're wondering why? Well it's very difficult to tell exactly how many spaces there are when there's more than one in a row. The dots show you exactly how many spaces there should be. See - we are trying to make it easier for you after all!

## Poking problems?

One of the letters Adam passed on to me was from Marie Butler on the subject of pokes. When I spoke to him on the phone he said that it was an ideal subject for me to tackle. I explained that I didn't really understand them myself! So he said well, you'd better find out then hadn't you!

Well, I've done my research, read a bit of cheat mode, and asked his nibs (ie Adam) for advice more than once. So here goes...

A poke is one of those words with double meanings. The most general term is to describe a way of altering the code of a game to allow you to cheat! The original meaning is different (and a sight more technical!). I'll try and put it as painlessly as possible, but to understand fully, you're going to have to listen to some fairly hefty explanations!

The computers memory is made up of several thousand locations. Each individual location is called a 'byte', and quite simply can hold a number. These numbers mean more to the computer than you or me! It interprets each number as an instruction, telling it to perform some action in machine code.

A 'poke' is a BASIC command that tells the computer to change the number held in any one of those bytes. There are over 65,000 of these bytes in your CPC, each can store a number in the range 0 - 255.

Any program written in machine code is simply a long list of numbers held in those bytes. Those numbers represent various instructions. By poking an individual byte, you change a part of the machine code program.

Take a typical game. Somewhere in there will be an instruction that decreases the number of lives you have, etc. If you're able to change that instruction, so that instead of decreasing the amount of lives it does nothing, then you have managed to cheat it! Whenever you die in the game, instead of decreasing the number of lives you have, they will remain the same, so you'll be able to play for ever and ever. Hurrah!

Finding which byte of memory to poke can be difficult. Most games are protected, so it's not easy to be able to put your 'poke' in. You need to understand machine code too, and recognise what the computer's doing to enable you to change the vital instructions. Also some games need several pokes to make the changes. If you want infinite bombs, infinite bullets and infinite lives etcetera, then you'll have to use at least one poke for each.

So most pokes take the form of listings, which poke several areas of memory. Some are in machine code, so that they can get round a game's protection and do their dirty work without being detected!

That's why the term poke often means a blinkin' great listing! To put these listings into the machine you simply type them in as a basic program. See the item about that elsewhere on this page...

Uncle Phil's Cheat Mode section deals in-depth with poking. To use most of the listings, simply type them in and RUN them. The game you wish to cheat should be in the tape or disk drive. The game will load, the memory poked, and you'll be able to cheat away!

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If you old timers out there must remember Cheat Mode 1, the collected hinting, tipping and poking wisdom of Amstrad Action's first sixteen issues. This magnificent 92-page epic was snapped up in its thousands by eager AA readers looking for a way to take the sting out of their fave games...

Well you ain't seen nuthin' yet. Cheat Mode II takes the best cheats from the last three years of Cheat Mode and crams it into 130 pages of absolutely essential info.

And as if that wasn't enough, we've gathered together 150 previously unpublished listings from such poking giants as Phil Howard, Mike Wong and Graham Smith.

Mind you, typing in all those listings is OK for practiced BASIC-bashers, but can be fraught for the rest of us... which is why Cheat Mode II is also available with cassettes containing all those pokes!

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# The Amazing Amstrad Action Kastle Kombe Karting Day

**What do you get when you combine six Amstrad Action Fifth Birthday Compo winners, the staff of Amstrad Action, six race-tuned, turbocharged, rubber-burning 900bhp monster go-karts (er, a bit of journalistic licence here) and a large cake?**

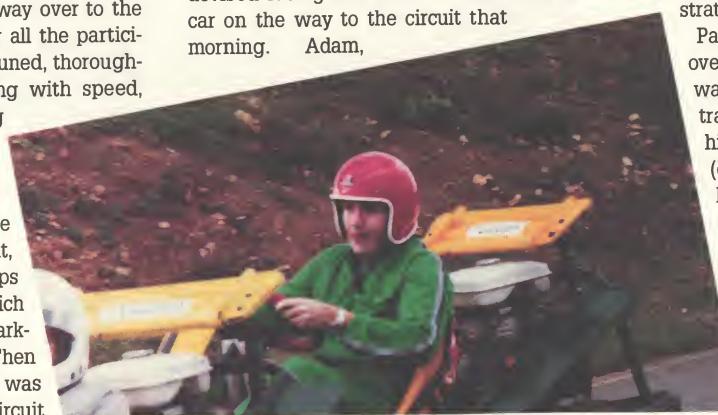
Absolute blinkin' mayhem, that's what...



Typically, it was the coldest day of the year so far. The wind whistled from Siberia across the Cotswold Hills straight into the bones of the assembled competition winners and Amstrad Action bods gathered at the Castle Combe go-karting circuit.

Everybody was kitted out in Mansell-style overalls, and as we made our way over to the track an awed silence fell over all the participants. There they were; fine-tuned, thoroughbred racing machines gleaming with speed, grace and power. Glittering metal symbols of man's determination to push himself to his very limits.

One by one the beasts were fired into life, and there they sat, throbbing purposefully, perhaps even angrily (except one, which seemed to have a dicky spark-plug). We could hardly wait! Then we watched amazed as water was sprayed onto a section of the circuit just before the most wicked corner. Water! What were they trying to do



● James glimpsed briefly in an uncharacteristic second place (he was usually in a ditch or sliding down the track on his head).

however, travelled round in a manner that could only belong to someone who has very little tying him to this mortal earth.

On to the first practice laps. These would have been a few sensible, acclimatising circuits which would give everyone a feel for the vehicles. Would have been. But unfortunately James 'Senna' Leach was one of the people to go round first. Regular readers will know that James and karting are old acquaintances. As all the other drivers gently motored around, James belted along like a madman, forcing everyone else out of the way. His thin, reedy voice could be heard bellowing triumphantly above the combined engine noise and tyre squeals, as he threw his kart around with all this finesse, skill and daring of a drunken Liverpudlian navvy wrestling with a runaway earthmover...

Rod and Adam also got their turn at a warm-up session; Rod (I've driven a Lotus) Lawton kept strictly to the scientifically devised racing line he had worked out in the car on the way to the circuit that morning. Adam,

there. She waited for everyone else to pile off on the corners and then scooted past. It was to prove a remarkably successful strategy.

Paul (INHYK) Tudor was totally bowled over by the event, and spent all the time he wasn't racing standing at the side of the track, shouting and waving his arms above his head in time-honoured Grand Prix style (or so he assured us, although no-one else had ever seen this occur at a Grand Prix or anywhere else).

And finally, the AA Photographer, Stuart Baynes. We persuaded him into a kart with the help of a pair of tyre levers and a tub of axle grease (he's about seven feet tall and parks trucks with his bare hands). Stuart was, quite simply, as mad as an egg-cup. He seemed determined to ram off

the circuit. He frightened all of us, even Stuart, who was almost as bad. Richard rammed off everybody he could. James in particular was foolish enough to enter into a duel with him and ended up two fields away, upside down, blubbing like a baby.

4 Simon Woodley. One of Dorset's finest. Well, we weren't sure what he was thinking for most of the time. He appeared to sizing up the odds and calculating the line of least resistance to take around the course. And what was worse, he appeared to be making copious mental notes about each of his fellow competitors. This might explain why the only time we saw him laugh was when Rod was on the circuit.

5 Richard Dobson, from Bicknacre in Essex

appeared to have such a cheery, carefree nature that we were sure it couldn't last. He took to karting like a duck to water, though.

He raced around so quickly that the rest of us

were looking for the rails which surely had to

everyone else on the track, as well as demolishing all the road-side crash-barriers and any spectators foolish enough to stand within thirty yards of the track.

The AA team hurled themselves into the warming-up laps with such vigour that they were totally exhausted by the time the real racing started. In contrast, the compo winners carefully bided their time...



● Rod demonstrates his overriding sense of fair play by punting Adam off in the final bend...

be driving on. As the day wore on, Richard lost none of his good humour. He also seemed impervious to the Arctic winds which knifed across the circuit.

6 Perhaps most striking competitor was Gareth 'Silver Bullet' Floodgate. He adopted a laid-back approach to karting. So laid back, in fact, that he was only three degrees off the horizontal. The reasons for this were two-fold; firstly his drag co-efficient was reduced to 0.28 Cd, and secondly it was the only way his feet could reach the pedals. His driving certainly didn't suffer, however. And, more importantly, he was the only driver not to suffer from a bruised back afterwards. This was due to the large number of cushions he had strategically placed between him and the seat.

The Silver Bullet was the winner of the final, compo-winners-only, race. Congratulations, Gareth! Braintree must have celebrated long into the night.

KARTING DAY OUT



## THE CUTTING OF THE CAKE

Once the racing was over, anybody who could still walk was summoned to the ceremonial cake-cutting. An reverent hush descended. Adam was issued with a tiny fruit knife which Rod had carefully bided their time...



● Would you tangle with this man?



● Adam digs in at the ceremonial cake-cutting.



● Rod managed a small crumb.

cealed about his person on the way to the circuit. The cake was pierced; Adam sawed away at it for several minutes (the icing was about a foot thick - yum!) but eventually he managed to tear off enough to give everybody a piece. Standing in a freezing field, covered with oil and bruises, eating a strange console-shaped birthday cake, we all declared the day an unqualified success.

## THE WINNERS

1 Philip Haddigan had travelled down from Scotland for the occasion. He started off being calm, unflappable and gentlemanly. This was perhaps not the correct attitude to take when dealing with manic humanoids such as James or Stuart. Philip soon repeatedly formed close attachments with the crash barriers around the track. In short, people were taking advantage of his good nature by slamming him into piles of old car tyres. Quite understandably, he was not best pleased. As the day wore on, he became more and more competitive until he was rushing round the circuit with his eyes popping out and his teeth set in a ferocious grimace. Never have we seen a man undergo such a complete transformation.

2 Mrs Hawes (Leslie to her friends), had only popped across from Worton near Devizes. Years of safe motoring had ingrained into her a road-sense that made her the most considerate, capable and reliable driver on the track.

Which unfortunately was a set of characteristics entirely opposite to those needed. Indeed, she was the only person to actually pull across to let people overtake her. While this style of driving is admirable on the highways and byways of Britain, it doesn't really ensure your chances of success on a slippery kart track. Leslie remained resolutely cheerful throughout the day, and kept driving solidly around the circuit while all the other tear-away drivers were thumping into each other, or disappearing off the track completely.

3 And then there was Richard Wildey. Another mild-mannered lad, he was transformed into a vicious, win-at-all-costs mad-



man on the circuit. He frightened all of us, even Stuart, who was almost as bad. Richard rammed off everybody he could. James in particular was foolish enough to enter into a duel with him and ended up two fields away, upside down, blubbing like a baby.

4 Simon Woodley. One of Dorset's finest. Well, we weren't sure what he was thinking for most of the time. He appeared to sizing up the odds and calculating the line of least resistance to take around the course.

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He raced around so quickly that the rest of us were looking for the rails which surely had to



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# The Amstrad Action

## CHRISTMAS COVERTAPE

It's pressie time again! Santa and all his little elves have been hard at work in his grotto getting together a present for all you loyal AA readers. (After all, you've been very good this year, haven't you?)

You haven't missed a single copy of AA... So what's Santa got in his sack? Sit down, that's right,

## THE A-SIDE

### Puzznic

The first of the Christmas goodies on the tape is a playable level from Puzznic. It comes from Ocean, that Mancurian software manufacturer that has been keeping gamesters happy for years. Puzznic is a superb brain-teasing puzzle game, and scored a very respectable 82% (that's a Rave!) in AA62.

Each screen consists of some walls, a cursor (that's you) and lots of blocks with symbols on them. The idea is to match up blocks of the same type. You can drag them left and right with the cursor (but not up or down – the game



● Play our Puzznic demo and you'll be hooked.

has gravity, and the blocks fall when unsupported).

When you match up blocks they disappear. The more you match up at the same time, the more you score. You have to get rid of all the blocks on the screen to progress to the next one. So be careful that you don't end up with an odd one left over!

If you do get stuck, simply press the retry button. You're allowed a maximum of three retries before it's game over. There are four

screens in this demo – each levels consists of four screens. In the proper game there are 144 screens to tease and torment you! So this is just a taster of what's to come!

#### Puzznic controls

The game is set to play on joystick, with 'R' as the retry option. To redefine the controls press 'C' when on the title screen.

### Lost Caves and the Tomb of Doom

A complete game, courtesy of brilliant budget brokers Players! Lost Caves is an arcade-cum-puzzle game. You step into the shoes of an Indiana Jones-type character. Your mission is to collect diamonds from the mud-filled, rock-strewn caves. Ten need to be collected before you can make your escape through the big wooden door – there's at least one of these in each level.

There are plenty of dangers. The mud needs to be dug away as you make your way through the caverns. Plenty of boulders are supported by the mud though, and if you burrow directly underneath them then they'll come tumbling down. If they land on your head,



● Bang! – you're dead. (Watch out for the bombs, by the way.)

you'll lose one of your three lives. The caves are guarded too. You'll have to use cunning to kill the guards, as contact loses you a life. Push rocks on top of them to squash them.

There are plenty of other tricks and traps to be discovered – lava traps... false walls... bombs... We'll leave you to find out exactly how they all work. Remember, all is not always what it seems...

There are sixteen tough and challenging levels to play through. The levels are quite



● Quick – go left! Otherwise you're mincemeat.

large, about thirty times as big as the area you can see at any one time!

This special version of Lost Caves has a built in cheat! It allows you to select any level you like at the beginning of each game. Just use up and down to choose the level, and press Fire to start it.

#### Lost Caves controls

Either use a joystick, or...

Q Up A Down  
O Left P Right  
SPACE Start/restart

Additionally...  
M Music on/off ESC Give up!

All programs load as follows:  
Wind to a point just before the star of the program, then type  
Run" (6128 owners type I tape first)  
Or hold down the CTRL key and hit ENTER

## THE B-SIDE

### Space Froggy

Space Froggy is a strange game. You're a frog for a start. For some reason that no-one can quite remember, you have to collect nine ROM chips. Oh, and there are 'space monsters' that try and stop you. And as if that wasn't enough, there are some tricky leaps to negotiate.



● Space Froggy looks great – and it's done in BASIC!

You can move left and right, and can jump. It's a platform game, and features moving floors. You'll have to find keys to get through some doors as well.

The game is an example of what you can do with Glenco's Sprites Alive package. The game was written entirely with this software, but as you will see, looks pretty darned good!

#### Froggy Controls

Froggy is joystick only. Use left and right to move, and fire to jump.

P to pause/unpause  
Q to quit, after you've paused



● Split-second timing is needed to cross the screen.

- Just bung a blank disk in the drive
- "Run" the transfer utility. It will come up with all the instructions you need. The program will transfer all normal Amsdos files, in other words, anything that isn't protected.
- After everything's been transferred, reset the machine. No more lengthy waits for the tape to run through.

And of course, after you've got all your programs transferred from the cover tape, you can use the utility to transfer software from other tapes to disk.

## LOST AND FOUND

*Lost Caves* was written by none other than AA's Reviews Editor, Adam Waring. It was a couple of years ago, before he wandered into Future Publishing by mistake and got stuck here ever since.

*Lost Caves* was written in a small office in the Hull, a city otherwise known as the Jewel of the North (by people from Scunthorpe, anyway). The office was in an old warehouse, overlooking a converted dock in the centre of the town. Unfortunately the Council found out and Adam and his colleagues had to flee.

The programming outfit was known as Tag Computer Games, mainly because they couldn't think of anything better. Other games from the Tag stable include *Ninja Massacre*, *Death Stalker*, *Moving Target* and *Arcade Trivia Simulator*.

The question everybody wants to know is: Will Adam be producing any more games for the CPC?

Not bleedin' likely! – for the time being anyway (*thank heaven for small mercies* – ed). Adam's just far too busy putting together your favourite magazine.

## THINK YOU COULD WRITE A GAME?

Have you ever wanted to write games, but found BASIC just too, well, *basic*? Not any more! Games writing package *Sprites Alive* adds a number of extended commands to BASIC, which are specially written with games writing in mind. There are commands to handle all aspects of gaming, including, of course, sprites.

The package comes complete with a sprite editor. This is a drawing program that allows you to design the graphics for your games. It's easy to use, and even the least artistic person will be able to come up with reasonable graphs!

After a few hours' use, you'll soon be designing your very own games! However, you may feel that the games could do with perhaps a bit more speed. That's where the Compiler comes in.

This part of the program converts your game into machine code, adding that extra touch of speed to make your games playable. The proof is in the pudding. The game *Froggy* was written in *Compiled Sprites Alive*. So if you want to write good-quality games without learning all that

complicated machine code, you need *Sprites Alive*.

AND... Glenco has kindly come up with a special offer, exclusively for the benefit of AA readers. For a strictly limited period, you can get yourself a copy of *Sprites Alive* and *Compiler* for £10 less than the normal price. Or, if you just want the basic version, Glenco is knocking £7 off that.

To qualify for your discounted copy of *Sprites Alive*, cut out the coupon, and send it, along with your cheque/PO made payable to Glenco Software to: AA Special Offer, Glenco Software, 15 Alford Lane, Whitehouse Farm, Stockton on Tees, Cleveland TS19 0QP. Make sure it arrives by 31st January 1991, when the offer ends.

● Two versions of *Sprites Alive* are available, the basic version and the compiler version. The offer price for the basic version is £15.95 (normally £22.95). The compiler version is available for £19.95 (normally £29.95). All orders must be sent directly to Glenco, we cannot deal with them here.

Please note that you need a good knowledge of BASIC to use *Sprites Alive*.

### AA SPRITES ALIVE SPECIAL OFFER

Please forward:

- Copy (copies) of Basic Sprites Alive at £15.95 each  
 Copy (copies) of Compiler Sprites Alive at £19.95 each

I enclose a cheque for .....

Name .....

Address .....

.....

Please Note: Offer expires 31st Jan 1991





# BrunWord

## Complete Word Processing Package £30

BrunWord 6128 is a complete word processing package consisting of a word processor, spelling checker and card filing programme. It out performs all other word processors for the CPC6128.

BrunWord uses its own high speed screen routine, giving it a very fast response. The editor features are logically arranged, to be easy to learn and the spelling checker with its dictionary load into memory at the same time as the word processor. The whole system is very convenient and exceptionally fast. It is supplied with an introductory tutor file.

### BrunSpell Features

- \*Memory resident programme and dictionary.
- \*Checks 4,000 words/min. \*30,000 word dictionary. \*No American spellings. \*Add up to 5,000 of your own words. \*Instant lookup.
- \*Helps to find correct spelling. \*Automatic correction.

### BrunWord Features

- \*40, 80 or 128 columns. \*Typing speed 200 words/min. \*True insert or overwrite. \*Justify or unjustify paragraph or whole text.

\*Balanced justification. \*Instant word wrap. \*Block save, move, copy, insert and delete.

\*Local editing with word delete/undelete. \*Adjustable margins and TABS. \*Word count.

\*Column/Line/Page display with file name.

\*Find and replace. \*Help menus. \*Memory files. \*Single character embedded printer commands (18 with 3 codes and 21 with 10 codes). \*Page throw markers. \*Multiple copies. \*Odd/even page headers/poters with page numbers. \*Multi file printing. \*Print specified pages. \*Use any printer. \*True display super/subscript numbers. \*User defined characters. \*Load/Save ASCII files from/to other word processors. \*Files can be encrypted. \*Maximum file size about 9 pages.

How They Compare		
	BrunWord 6128 & BrunSpell	Protex Disc & Prosspell
Typing into 241 word paragraph	218 w/m	218 w/m
Typing into start of text	218 w/m	218 w/m
Scroll to end, line by line	1 min 27 sec	2 min 2 sec
Justify paragraph of 241 words	1 sec	0.2 sec
Change appearance to format and Appearance to Format	17 sec	17 sec
Spelling check 3366 words Average speed Disc changes	52 sec 3883 w/m None	6 min 24 sec 526 w/m 8
Spelling help 'NECESSARY'	0.5 sec	18 min 46 sec 179 w/m 3
Screen format - columns Page boundaries	40, 80, 128 Shown	Not possible 40 or 80 Not shown
	Not possible 80 only Shown	Not possible 80 only Shown

# BrunWord Elite

## Elite Word Processor For CPC6128 £55

BrunWord Elite has a unique advantage over its rivals, it can only be used with dot matrix printers. All other word processors are compromised to drive daisy wheel and dot matrix printers.

In the early days of computing a printer was simply a form of electric typewriter. (High quality printing, noisy and very slow). Then came the dot matrix printers, specially designed for computers. (Medium quality printing, not so noisy and much faster). Over the years, the typewriter style has become the daisy wheel printer and although greatly improved, it has been left far behind with the quality, speed and versatility of modern dot matrix printers.

Most word processors, including BrunWord 6128, can use dot matrix and daisy wheel printers. This creates the need for a style of printer control that is acceptable to two very different types of printers.

BrunWord Elite does not have this restriction as it is specifically written to be used only with dot matrix printers. This gives it a unique advantage over other word processors and as a result it is able to provide much more advanced printer control.

This is taken even further, as BrunWord Elite is supplied with an 8 Bit Printer Status Port which allows the programme to continuously monitor the status of the printer, as well as providing the missing 8th bit for the original CPC6128. This means that BrunWord Elite is able to respond in a more sophisticated way than normally possible. It will wait for ON LINE or [ESC] if the printer is initially OFF or OUT OF PAPER but automatically returns to the editor if the printer is turned OFF.

**Headline**  
Headline is a print enhancement utility specially designed for use with low cost 9 pin printers. It enables virtually all the features of BrunWord Elite, including the 24 pin fonts, to be used with any 9 pin Epson compatible printer. The only requirement is that the printer must have quadruple graphics (all well known modern 9 pin printers). Even printers which do not have double height printing will be able to use all the features of Headline, including micro justification, normal, double and eight times height, and 1 to 9 times width.

### 9 Pin Elite £55

BrunWord Elite, BrunSpell, Headline, an 8 bit printer status port and 7 type setting fonts (fonts are 24 pin in size but only for 9 pin printers). Total price £55.00 inclusive.

**24 Pin Fonts**  
Before we designed the fonts for BrunWord Elite, we studied several good magazines and concluded that the bulk of the text was printed in fonts that derive from two basic themes. Our fonts Fineline and Finetypewriter are variations of these two styles, optimised for dot matrix printers. Fineline is supplied in three sizes and Finetypewriter in two sizes. To these we added a display font in computer style type and a straightforward 'Heavy' font. Altogether there are 7 fonts supplied, four are full 24 pin fonts, two are middle size 21 pin fonts and one is a small size 16 pin font.

### 9 Pin Elite+Info £92

As above but including Info-Script and a backup disc. Total Price £92.00 inclusive.

### 24 Pin Elite £90

BrunWord Elite, BrunSpell, Info-Script, back up disc, an 8 bit printer status port and 7 type setting fonts for downloading to a 24 pin printer. Total price £90.00 inclusive.

BrunWord 6128 with BrunSpell & DataFile... £30.00  
Info-Script with BrunWord 6128 & BrunSpell... £50.00  
9 Pin BrunWord Elite ..... £55.00  
9 Pin BrunWord Elite with Info-Script..... £92.00  
24 Pin BrunWord Elite with Info-Script.... £90.00  
100 Letters (Needs Info-Script)..... £15.00  
Supplied on 3in Disc for CPC6128 or CPC6128 Plus.

You must state which computer.  
All prices are inclusive for UK. Overseas orders sent insured air mail - Europe add £2.50 : Rest add £7.50

# Info-Script

## Complete Data Processing Package £50

Info-Script includes BrunWord 6128 and BrunSpell. The word processor and database can be resident together, giving the convenience of access to both programmes with no disc delays.

Info-Script is written around the full BrunWord 6128 word processor, enabling many routines to be common. This makes a very compact combination and allows both programmes, 6 pages of text and 1000 addresses to be in the memory at the same time using a standard CPC6128 (or 6128 plus). The great advantage of this is the speed and convenience of no disc delays.

### Database Features

\*Very fast (e.g. takes 1 second to search 2000

addresses for surname 'Smith', initial 'B').

\*Specific field search and/or progressive general search. \*Instant sort on any field, alphabetical, numerical, date or reverse order (zero time as the data does not move).

\*3 sets of user defined headings for each file.

\*4 markers for instant selection, plus one temporary marker. \*Markers can be cleared or inverted and any pair can be added (allows complex searches to be quickly and easily performed). \*No setting up of field type or length. \*Efficient storage. \*Relational records, Parents, Sons and Daughters. \*Field to field arithmetic. \*Direct data merging into BrunWord. \*Easy direct label printing, 1 or 2 across, left of 2 or right of 2. \*Single or multi-step.

### 100 Letters £15

100 Letters is a utility for use with Info-Script, enabling pre-written letters to be easily selected and personalised. It is supplied with a library of 50 letters but even the most cautious users will be able to write simple letter patterns to expand the library to '100 Letters'. If multi-purpose patterns are used then the upper limit depends only on the skill of the writer. A third type of letter pattern, aimed at solicitors, doctors, school teachers, estate agents etc, consists of up to ten pre-written paragraphs. The user indicates which of the paragraphs are to be used. 40 separate letters can be added using this style.

### 24 Pin Fonts

Before we designed the fonts for BrunWord Elite, we studied several good magazines and concluded that the bulk of the text was printed in fonts that derive from two basic themes. Our fonts Fineline and Finetypewriter are variations of these two styles, optimised for dot matrix printers. Fineline is supplied in three sizes and Finetypewriter in two sizes. To these we added a display font in computer style type and a straightforward 'Heavy' font. Altogether there are 7 fonts supplied, four are full 24 pin fonts, two are middle size 21 pin fonts and one is a small size 16 pin font.

Send cheque/PO/Access number/Visa number to:

## Brunning Software

34 Helston Road,  
Chelmsford, Essex, CM1 5JF  
Telephone (0245) 252854 (24 Hours)



# Programming in three dimensions

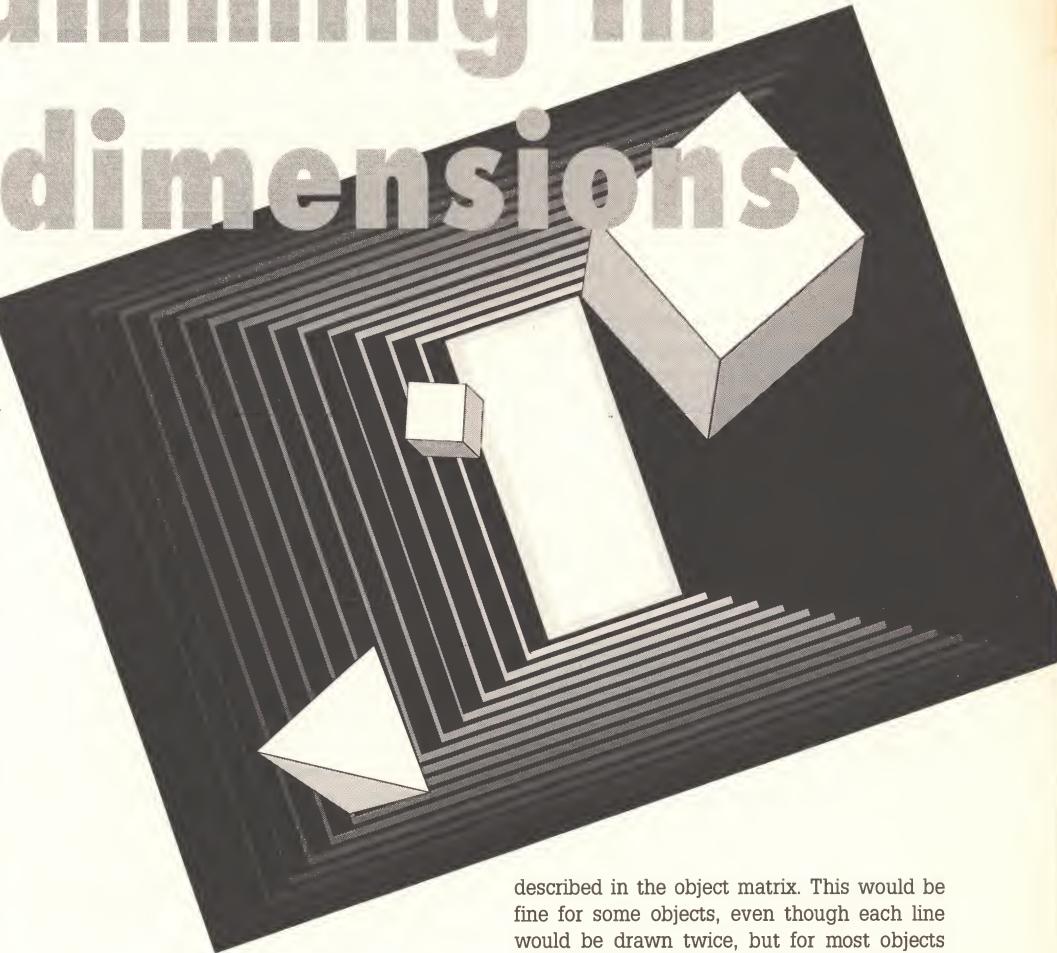
CONRAD BESSANT continues his series on 3D programming. Last month: two-dimensional basics. This month: first steps in 3D...

**H**aving written a simple program to rotate and shrink two-dimensional objects last month, we can now move on to doing similar things in three dimensions.

As discussed in the previous article, two-dimensional objects such as triangles and squares can be described using a matrix like that shown in figure 1, where each column of the matrix represents a corner (vertex) of the object. The top number in each column is the x position of the vertex and directly below it is the y position. Such a matrix is inadequate for describing a three-dimensional object, a pyramid for example, as there is no space to store the z position of the vertex. The z position represents the displacement into the screen, just as the x position represents the horizontal displacement of the vertex and the y position represents the vertical displacement. Figure 2 shows how these positions give rise to an object.

To describe a three-dimensional object, such as the pyramid shown in figure 2, an extra space must be added at the bottom of each column to store the z position. An object matrix for the pyramid is shown in figure 3; as an example, note that the position of the first vertex is at x=0, y=180, z=0.

There is one rather large obstacle when trying to plot something like a pyramid on the screen - the object is in three-dimensional



space while the CPC's screen is only two-dimensional. Luckily, we don't need the likes of 3D glasses to trick our brains into thinking that

something on the screen is three-dimensional, as there is a simple way to convert a position stored in (x,y,z) form to the (x,y) form needed to plot lines on the screen. The formulae to do this are given below:

$$x = x + z * 0.5 \\ y = y + z * 0.289$$

This is basically a computer implementation of the three-dimensional technique used by draughtsmen, called isometric drawing. It works by plotting the x and y positions on their usual axes, but plotting the z position along an axis at 30 degrees to the horizontal, like the one shown in figure 2 (maths fans will be pleased to know that 0.289 is half the tangent of 30 degrees).

For simple two-dimensional shapes, like last month's triangle, a simple drawing routine could be used which just joined each vertex to the next one by drawing a line; three vertices gave three lines. With 3D shapes like the pyramid, such a routine is too simple, as eight lines need to be drawn from a matrix of only five corners. If we used last month's routine three of the lines would be missed out.

The most obvious routine to use would be one that joined each point to every other point

described in the object matrix. This would be fine for some objects, even though each line would be drawn twice, but for most objects unwanted lines would be drawn. For example, the square base of our pyramid would have diagonal lines drawn automatically between its opposite corners.

The best solution is to keep a list, for each vertex, of the vertices which we would like it to draw a line to. For example, the lists for our pyramid would be those shown in figure 4. Two zeros are used to mark the end of the list. This list can easily be stored in a 5x5 BASIC array, and then retrieved by the drawing routine when it is needed. See figure 4.

Now that we have all the information required to store and display three-dimensional objects we can write a program to do it, based on the one given last month. The program is shown as listing 1:

### Listing 1

```
10 MODE 8:ORIGIN 320,200
20 n=5
30 DIM object(n-1,2)
30 DIM con(n-1,n-1)
100 FOR x=0 TO n-1
110 READ object(x,0),object(x,1),object(x,2)
120 NEXT x
130 DATA 0,180,0, -200,-100,-200, -200,-100,200,
200,-100,200, 200,-100,-200
200 con(0,0)=2 : con(0,1)=3 : con(0,2)=4
210 con(1,0)=0 : con(1,1)=4
220 con(2,0)=3 : con(2,1)=1
230 con(3,0)=4
```



```

500 FOR vertex=0 TO n-1
510 pointer:=0
520 x=object(vertex,0)+object(vertex,2)*0.5
530 y=object(vertex,1)+object(vertex,2)*0.289
540 vercon=con(vertex,pointer)
550 WHILE vercon<0 OR con(vertex,pointer+1)>0
560 MOVE x,y
570 cx=object(vercon,0)+object(vercon,2)*0.5
580 cy=object(vercon,1)+object(vercon,2)*0.289
590 DRAW cx,cy
600 pointer=pointer+1
610 vercon=con(vertex,pointer)
620 WEND
630 NEXT vertex

```

Lines 100-120 load the pyramid data from line 130 into the object array. Lines 200-230 set up the array containing the lists of connections for each point. Lines 500-630 perform the drawing of the pyramid, using the connection lists, as described above. Line 20 sets n to the number of vertices that make up the object (our pyramid has five vertices).

If you RUN the program in its current state you will notice that something is missing, the animation. Last month matrix transformation for two dimensional objects was explained, and although a similar method can be used for 3D, the same routine can not. This is because each vertex of a three-dimensional object has three values associated with it, these being the x, y and z positions. Because of this we must use 3x3 transformation matrices. A sample one to rotate a 3D object anticlockwise, by just over

11 degrees around the y axis, is shown in figure 5. This can be placed in an array called transform by using lines 300-330 of listing 2. By rotating the pyramid by 11 degrees eight times, we can get the pyramid to perform a quarter of a complete rotation, i.e. a rotation of 90 degrees. As the pyramid has a square base this brings the triangle back to what appears to be its starting position, so the process can be repeated again. After four repetitions the pyramid will have completed a full 360-degree rotation.

Multiplying a 3x3 transformation matrix by a 3xn object matrix is done in a similar fashion to that for 2x2 transformation matrices. The routine given in listing 2 (lines 700-750) will multiply the two matrices and will take into account the extra component of the vertex positions.

### Listing 2

```

300 FOR x=0 TO 2 : FOR y=0 TO 2
310 READ transform(x,y)
320 NEXT y : NEXT x
330 DATA 0.981,0,0.195,0,1,0,-0.195,0,0.981
400 FOR colour=1 TO 8
410 GRAPHICS PEN colour
700 FOR x=0 TO n-1
710 t=object(x,0)*transform(0,0)+object(x,1)*
    transform(1,0)+object(x,2)*transform(2,0)
720 m=object(x,0)*transform(0,1)+object(x,1)*
    transform(1,1)+object(x,2)*transform(2,1)
730 b=object(x,0)*transform(0,2)+object(x,1)*
    transform(1,2)+object(x,2)*transform(2,2)

```

```

740 object(x,0)=t : object(x,1)=m : object(x,2)=b
750 NEXT x
800 NEXT colour
900 FOR a=1 TO 8 : FOR b=1 TO 8
910 IF a=b THEN INK b,25 ELSE INK b,1
920 NEXT b : NEXT a
930 FOR c=1 TO 8 : INK c,1 : NEXT c
940 GOTO 900

```

Also included is the colour switching routine introduced last month (lines 400,410 and 900-940). It has been slightly altered, so as to only display eight animation frames, rather than 15. This is to increase speed and to make the pyramid sharper on the display.

Running the program now will give you a rotating pyramid on your screen, at a quite impressive speed for BASIC. You may notice that pixels are missing where animation frames overlap: this is due to the over-simplified colour switching routine, which gives worse results the more complex the object is (i.e. the more vertices it has). This is why only eight animation frames were used. An improved colour-switching routine will be discussed in the next article of this series.

Because the program runs in a continuous loop the only way you can stop the program is by pressing the Escape key. If you do this, or the program stops due to an error, you may not be able to see what you're typing. This is a consequence of the colour switching and can easily be put right by typing INK 1,25.

Now that the basic routines of the program

have been written, different effects can easily be created by using different objects and matrices. My favourite object for 3D graphics is shown in figure 6. It is meant to be a simple spaceship, but it has been described as anything from a bow-tie to a moth! Note that although this shape is only two-dimensional, it can be moved around in three dimensions using the routines given above. The object can be loaded in instead of the pyramid by amending the lines shown below. Line 20 sets the number of vertices of the object to four, line 130 holds the positions of these vertices in  $x_0, y_0, z_0, x_1, y_1, z_1, \dots$  format. Lines 200-230 determine which vertices each vertex connects to, as in the pyramid example. The zeros used to mark the ends of the connection lists do not need to be put into the array in these lines as BASIC arrays are filled with zeros as soon as they are dimensioned.

```

20 n=4
130 DATA -100,-50,150,-100,50,150,100,50,150,100,
      -50,150
200 con(0,0)=1 : con(0,1)=2
210 con(1,0)=3
220 con(2,0)=3
230 con(3,0)=0

```

Because the program so far has been optimised for a square-based pyramid, changing only these lines is not enough to get the spaceship rotating in a full circle – don't forget the pyramid was only really rotating by 90

degrees. Because the spaceship is of a simpler construction than the pyramid, it is perfectly acceptable to have fifteen animation frames rather than the pyramid's eight. To make the program draw these extra animation frames, all you need to do is change all the eights in lines 400, 900 and 930 to fifteens. Now to rotate the spaceship in a full circle of 360 degrees all we need to do is rotate it by 24 degrees 15 times, so line 330 should be replaced by the one below so as to load the 24 degree rotation matrix into the transform array, rather than the 11 degree one used with the pyramid.

```
330 DATA 0.914,0,0.408,0,1,0,-0.408,0,0.914
```

Several useful transformation matrices are shown in figure 7, and suitable replacements for line 330 are shown below. For those of you who are not familiar with trigonometry, 'sin a' simply means the sine of the angle a, so just substitute the sine of the angle you require into this slot of the matrix (an angle of  $a=24$  degrees is substituted into the lines below; this means 15 frames are all you need to rotate the object 360 degrees). To find the sine of an angle you need look no further than your CPC! Just type DEG to put BASIC into degrees mode and then type PRINT SIN(a), where a is the angle. The same goes for COS a. As an example DEG:PRINT SIN(24) will return approximately 0.408.

Rotate object anticlockwise about the x axis (24 degrees):

```
330 DATA 1,0,0,0,0.914,0,0.408,0,-0.408,0,0.914
```

Rotate object anticlockwise about the y axis (24 degrees):

```
330 DATA 0.914,0,0.408,0,1,0,-0.408,0,0.914
```

Rotate object anticlockwise about the z axis (24 degrees):

```
330 DATA 0.914,0,0.408,0,-0.408,0,0.914,0,0,1
```

Enlarge (to 120% of its original size):

```
330 DATA 1.2,0,0,0,1.2,0,0,0,1.2
```

Reduce (to 80% of original size):

```
330 DATA 0.8,0,0,0,0.8,0,0,0,0.8
```

All of these transformation matrices will work on all objects such as the spaceship given above, or any other shape you define using lines 20, 130 and 200-230.

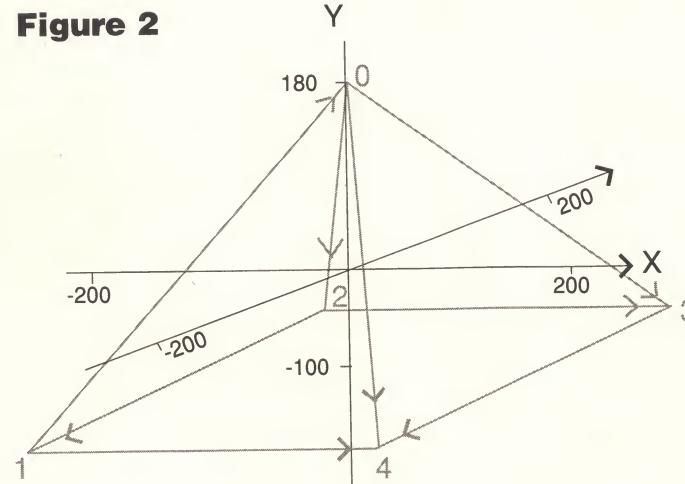
Obviously our program is seriously limited at the moment by the over-simplified colour switching, and maximum of 15 animation frames.

● Next month I shall be explaining how to break the 15-frame barrier by using better colour and screen switching, how to speed up 3D animations, and how to arrange objects and programs to create the best three-dimensional effects.

**Figure 1**

$$\begin{pmatrix} x_0 & x_1 & x_2 \\ y_0 & y_1 & y_2 \end{pmatrix}$$

**Figure 2**



**Figure 3**

$$\begin{matrix} x & \begin{pmatrix} 0 & -200 & -200 & 200 & 200 \\ 180 & -100 & -100 & -100 & -100 \\ 0 & -200 & 200 & 200 & -200 \end{pmatrix} \\ y & \text{vertex vertex...} \\ z & \text{0 1 4} \end{matrix}$$

**Figure 4**

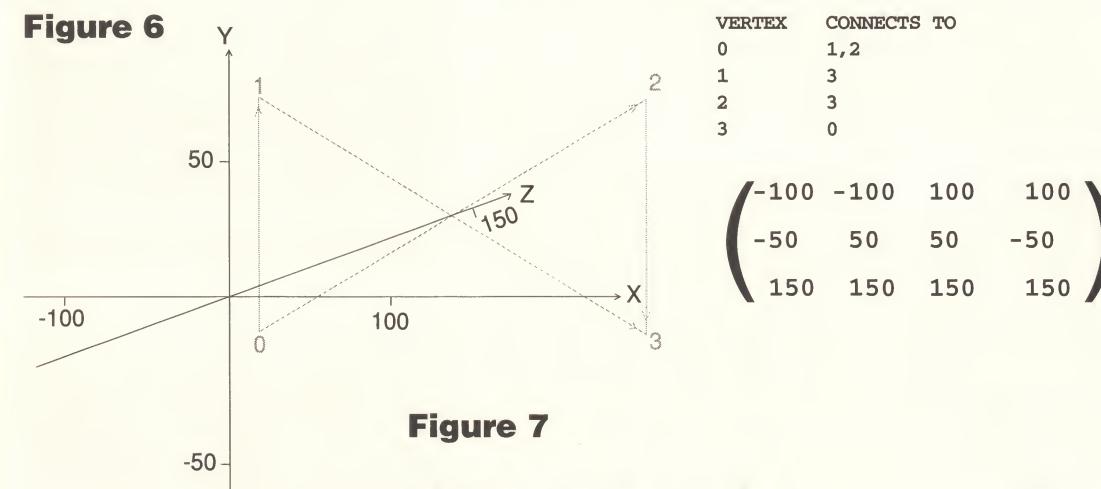
VERTEX	CONNECTS TO
0	2,3,4
1	0,4
2	3,1
3	4

**Figure 5**

$$\begin{pmatrix} 0.981 & 0 & -0.195 \\ 0 & 1 & 0 \\ 0.195 & 0 & 0.981 \end{pmatrix}$$

Arrows indicate direction in which the connecting lines are drawn

**Figure 6**



**Figure 7**

$$\begin{pmatrix} \cos a & -\sin a & 0 \\ \sin a & \cos a & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

Rotate 'a' degrees about the x axis

$$\begin{pmatrix} \cos a & 0 & -\sin a \\ 0 & 1 & 0 \\ \sin a & 0 & \cos a \end{pmatrix}$$

Rotate 'a' degrees about the y axis

$$\begin{pmatrix} s & 0 & 0 \\ 0 & s & 0 \\ 0 & 0 & s \end{pmatrix}$$

Enlarge by scale factor 'S', i.e.  
S=2 gives twice the size and S=0.5 gives half the size



# Counting the cost

If you run your own small business you already know about all the paperwork. There's the tax man, VAT, national insurance... you spend half your time book-keeping. And before you even start any job there's the estimate to prepare. ABC may well have a solution in Costmaster...

## COSTMASTER

**£27.99 disk • ABC Software • 31 Magdalen Way, World, Weston-super-Mare, Avon BS22 0PG. Tel: 0934 516714**

First of all, make sure your costing needs are complex enough for a program like this. Basically, if what you need takes only a minute on a calculator, then you'll have little need for a computer programme which takes longer than that just to set itself up. If, however, your costing work takes up valuable time and contains many repetitive elements, then read on...

ABC Software has produced a program which allows you to cost/estimate a job. It also lets you store details of individual jobs in a customised database which is easily manipulated, and has all a wide range of functions.

The basis of the system is a file into which you add the relevant information either manually or by merging items from the built-in price index, to build up a final costing.

There are three elements to each costing file:

- Firstly, there are the customer details. This

Customer details		COST FILE:GMP	PRICE INDEX:NONE IN.MEM	DRIVE:R
CUSTOMER	: [A]	(	)	
SURNAME	: >OURRE	(	)	
FORENAME	: MICKEY	(	)	
ADDRESS 1	: 1234	(	)	
ADDRESS 2	: HOLLYWOOD AVE	(	)	
TOWN	: HOLLYWOOD	(	)	
COUNTY	: LOS ANGELES	(	)	
POSTCODE	: SE12 5FG	(	)	
TELEPHONE	: 018123245655	(	)	
JOB NO.	: 12	(	)	
DATE	: 25.11.90	(	)	
EXT.DIR	: (	)		

• All the detail you'll ever need on your clients.

is basically a standard database containing information about the client. As well as name and address, it includes an identification number which references it with other parts of the program.

• Secondly, there are the alpha-numeric definitions (getting a tad complicated, this). These allow you to press a single key to correspond to the variable of your choice. The variables are things which change rarely enough to let them be programmed in and saved – an example would be the price of ballcocks in a plumbers' estimating program.

There are up to 36 saveable definitions,

• Thirdly, there is the cost file. This holds the results of the equations which make up the costing. It's the central function of the program.

The three sub-files above can be saved separately, and can even be stored on separate disks. An ID entry system allocates specific customers to specific definitions. This is a fail-safe security device to prevent different definitions becoming crossed.

Entering and controlling text is easy. The main menu allows single keypresses for regularly-used items, and everywhere the Delete

key will take out any mistakes. The cursor keys can also often be used to move around and change things. Mistakes are easily rectified, and there are standard warnings when you're about to erase data or save changed files.

Costmaster uses the standard time-honoured format of one main menu controlling a more complex and detailed 'tree' of other menus. It is very easy to return to the high-level main menu (usually by hitting ESCAPE).

A feature which we think is unique to Costmaster is the Program Monitor. This gives a recorded display of the last ten 'moves' you made. This removes the worries that you might not have saved your files, or that you haven't updated them recently. It is a very useful feature, and one which many other serious software packages would benefit from.

What this program does is marry together a database of customers with the necessary equations and formulae for a rapid and accurate costing. It is powerful enough to handle as many variables and factors as a small business is likely to need.

The manual is factual rather than fun, but does cover every aspect of the program. It isn't really for the beginner, though. The assumption is that you'll know what you want to do with this program, and that you understand costing and estimation work already. If you're looking for a tutorial, buy a book.

James Leach

PROGRAMME OPTIONS		COST FILE:GMP	PRICE INDEX:	DRIVE:R
SELECT OPTION		PROGRAMME MONITOR : FILE		
Numeric definitions	: [N]	: Customer details : GMP		
Alphabetical definitions	: [A]	: Edit/View cost file : GMP		
Load definitions	: [L]	: ESCI last option : GMP		
Save definitions	: [S]	: Edit/View cost file : GMP		
Print definitions	: [P]	: Load price index : GMP		
Change Inks	: [C]	: ESCI last option : GMP		
Define temporary keys	: [D]	: ESCI last option : GMP		
Version number	: [V]			
[F1] Cost file Options [F2] Price Index Options [F3] Disc Utilities [F4] Programme Setups				
SELECT OPTION BY LETTER IN BRACKETS OR USE THE CURSOR KEYS AND PRESS ENTER]				

• The Program Monitor (on the right) is very useful.

Edit/View cost file		COST FILE:GMP	PRICE INDEX:	DRIVE:R
Job	: 12	Date : 25.11.90	Client : 12	
Line	: 1	Entries : 0	Display Totals : N	
ID		Notes	QTY COST PER % SUBTOTAL TOTAL	
ALABOUR 20 PER HOUR		( N )		
BYPHONIC 2 PER MILE		( D )		
BYTAN COCK 2		( P )		
DWASHER 20P		( O )		
E2BURN-ITE 5 PER METRE		( R )		
F7PLUS 1		( S )		
G1LABOUR 40 PER HOUR (NOT 9-5)		( T )		
H1TAP 5		( U )		
I3BURN IMP 10		( V )		
J10 BEET 20		( W )		
K10 CUP OF TEA DISCOUNT -5%		( X )		
L1		( Y )		
M1		( Z )		
FILE SUB : 0.001 FILE TOT : 0.002				

• Individual costing variables are stored clearly.

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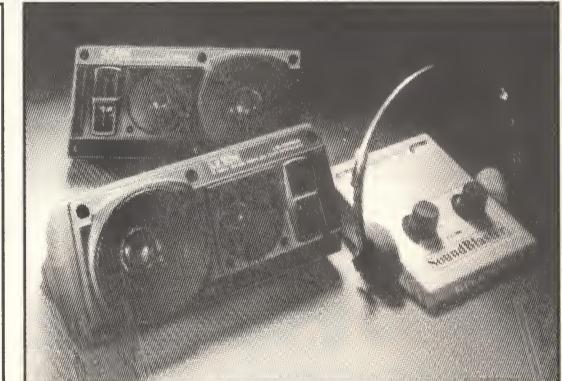
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# ActionTest

Gremlin's at it again, this time with its first console game...

## SWITCHBLADE

Gremlin's first console game takes a bit of getting used to. The graphics initially look distinctly second-rate, the gameplay seems simple and there doesn't seem to be much going on. Don't be fooled. Play on, and you'll find yourself becoming immersed in a huge, compelling and highly challenging epic...



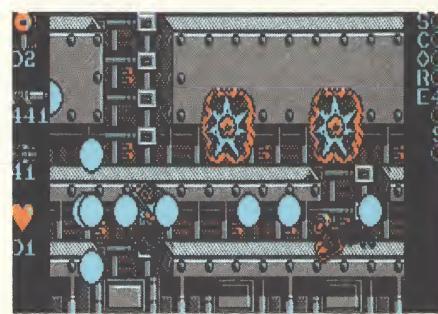
• Does Flimbo's Quest out-cute Rainbow Islands? Page 48 has the answer...



• Can you save the world from arch-villain Stromberg? Spy Who Loved Me is on page 66...



• Another Dizzy sequel? An excellent budget outing or a jolk of a program (sorry)? Find out on page 63...



• Is it worth staying up for Midnight Resistance? Page 68 has the answer...

## ACTION TEST

### FLIMBO'S QUEST

System 3 • £9.99 cass, £14.99 disk  
joystick/keys

Imagine living in a place called Dewdropland. Where the sun shines brightly every day, and people jump out of bed and look forward to the day ahead. A cute land filled with gingerbread houses, with no unpleasantness at all. No wars, unemployment, inflation or trouble. Wouldn't it be great?



• Ooo! Couldn't you just eat that cute house?

The answer is, of course, no. It would be horrible. Just imagine how bored you'd feel. You'd deliberately try and mess things up just to make it interesting.

And one man who has tried to is Professor Fransz Dandruff. He's kidnapped Pearly, Dewdropland's reigning beauty queen. As nothing in Dewdropland remotely approaches ugliness, you can imagine how utterly scrumy my young Pearly is.

However, her disappearance has not gone unnoticed: her cute co-habitee Flimbo has vowed to rescue the poor dear from the slimy yet surprisingly strong clutches of Dandruff. To this end, he has set off towards Dandruff Manor, where she's being held (very tightly).

Before reaching Pearly, Flimbo must negotiate seven levels of baddies. These are the Genetically Undesirable Mutants that the Prof has been breeding in his lab. Rather than pity



• Dazz in his shop will try and flog you guns, scrolls and extra time.

these poor creatures, Dewdropland's population want to see them exterminated (presumably because they're not beautiful enough to live). Flimbo has a gun, and gets twenty quid for each mutant he murders. This money is very useful, because each level has a shop. The proprietor of these shops is a curious individual known only as Dazz Bazian. He sells various useful items, such as Temporary Invulnerability, a better gun, scrolls and an extension to your time limit.

The scrolls are the key to each level. You must collect a certain number. You can get them by killing any flashing mutants, who drop them, or alternatively by saving up your money and buying them in the shops. Usually you'll get all the scrolls you need by a combination of these methods. Collect enough and you'll proceed to the next level.

As you explore each level, you come across unexpected hazards, extra rooms (packed with loot) and other surprises. All the time you'll be slaughtering hordes of mutants and collecting the little piles of dosh they leave behind.



• Zap those marauding molluscs. They're worth £20!

Each level has one of Dazz Bazian's chain stores (which, like McDonalds, all look the same inside). They also all have a secret room at each end of the playing area. There are one or two new mutants in every new level, but they behave in a very similar way to the ones that they have replaced on the previous level.

A clock ticks down in the bottom right-hand corner. This time limit dissuades you from staying in a safe spot and blasting the mutants until you have enough money to buy all the scrolls you need.

#### SECOND OPINION

"Gameplay is extremely limited. You just kill, kill and kill until you have enough scrolls to get to the next level. The graphics are none too special, either." AW

The graphics are, like Dewdropland itself, bright and cheerful. They are smooth, large and cute, but because of the detail on some of the levels, can look rather confusing. Flimbo sometimes merges with the backgrounds on some screens, to become a jumble of colours. The first screen suffers from this more than the others.



• The third level. Things get tricky for our little pal.

Flimbo waddles around wearing a Babygro, and with a beanie on his huge head. This hydrocephalic appearance is as cute as any could stand without feeling nauseated. The mutants also look good. One type seems so harmless and pathetic that it's almost a pity to waste them in their droves. But at £20 a head, it's certainly worth it.

Sound is simple, and contrasts rather with the sugary-sweetness of the display. There is a nice, fluffy theme tune, too.

Flimbo's Quest is cutesy, colourful and not too difficult. There are no hard puzzles, and not many split-second leaps. There are two ways to get through the levels; firstly just kill everything on one or two screens until you've enough money to buy your way up; secondly to explore, and to kill the scroll-bearing mutants as and when you find them.

The lack of real challenge means that you generally lose your lives by making silly mistakes, which can get very tedious. This lends the game an infuriating addictiveness. You know that you can get to the next level, but you scream and shout when you don't make it.

This is a compulsive game. It's very frustrating and you'll keep playing with grim determination. This is totally contradictory to the sweetness oozing out of the program, but it works, and it's fun.

James 'sweetness and light' Leach

#### FIRST DAY TARGET SCORE

Get to Level Three

#### The Verdict

##### GRAPHICS ..... 75%

Rainbow Islands still has it, but this is close.

##### SONICS ..... 56%

A wee bit dour.  
 A nice tune, though.

##### GRAB FACTOR ..... 77%

Not too difficult to understand or play.  
 You can't really get lost, either.

##### STAYING POWER ..... 66%

Can get a bit samey.  
 Each level requires a similar approach.

##### AA RATING ..... 73%

Not too difficult but very frustrating.

BBC

# eddy!



# Switchblade



Hiro is the last of the Bladeknights, a trained warrior with a hi-tech re-programmable cyber-arm which can accept any number of different and ever more destructive weapons. He can also kick and punch hard enough to demolish

walls and leap huge distance with one thrust of his mighty limbs. He's also about three feet tall, shaped like a seven-year-old Schwarzenegger and wears his cap back to front. We won't worry about that, though.

Needless to say, Hiro has a rather important task to perform. Namely, to rid the world of Thraxx of the evil Havok, who has dominated the world since the shattering of the Fireblade (you are paying attention, aren't you?). As Hiro, you must explore the Undercity beneath the surface of Thraxx, battling Havok's evil and ghastly minions and assembling the bits of the Fireblade so that you can use it against the evil geek himself.

OK, never mind the scenario, let's get cracking... oh, is that it? Hmm, click past the opening text screens and your first glimpse of the game itself is worrying. Um, the graphics only take up half the screen, and, er, there's only one colour, if you don't count black and white...

Yes, well, let's not worry about the graphics for a moment - what does it play like? Well, Hiro's a game little chap. Admittedly, there's no great urgency about his walk - more like



Get that heart! It's extra energy and you need it.

um...). Suddenly you're in a different - underground - world. So this is where all the colours are! Yup, once you're underground, Switchblade suddenly looks a whole lot better.

Hiro starts out with five lives and a full com-



Hmm - bit of a sticky wicket here. You can knock off that Mansnake next to you, but you'll take a lot of damage going down the ladder to the next...



...But if you kick that wall in, to and behold! - a whole new room and an easy way round. Always look out for small wall blocks showing extra detail to the others...



...Now you can just go back and kick that other Mansnake's head in - at no personal risk to yourself, too. There are a number of little puzzles like this to be solved with a little extra thought.

## HAZARDS AND ENEMIES

Flames	0 points
Proximity sensing floor spikes	0 points
Bladeballs	0 points
Spikelite	Mutant insectoids covered with poison tipped spines. 50 points.
Cybata	Lethal bat creatures that strike with blade claws. 100 Points.
Mansnakes	Fierce cybernetically enhanced serpent-men armed with powerful mechanical claws. 100 Points.
Spiders	Wall climbing robot sentries. 100 Points.
Crestheads	Armoured mutant warriors that fight with razor sharp wrist knives. 200 Points.
Reptiles	Powerful lizard men that rely upon pure strength as their only weapon. 250 Points.
Scorpoids	Robot scorpion creatures with spinning blade stings. 250 Points.

## VERDICT

### FIRST DAY TARGET SCORE

Find three Fireblade bits

GRAPHICS 96 %

SONICS 86 %

GRAB FACTOR 81 %

STAYING POWER 93 %

AA RATING 94 %

Huge, and so playable!



enemy's visage, keep it pressed until your 'kickometer' (bottom of the screen) reaches maximum and you can kick the other guy's legs off. Brilliant!

Switchblade is basically a *Rick Dangerous*-style game, where you must explore the underground corridors, avoiding traps and dealing with various nasties on the way. Unlike *Rick Dangerous*, however, you can't actually 'see' a room until you go into it. So, as you're exploring, you really are in the dark - and that adds a great deal to the game. Switchblade doesn't have *Rick's* humour, either, or its range of puzzles, but it makes up for it with a wide variety of evil beasties and a whole host of collectable



1. Now you've got a problem - how do you get that bit of the Fireblade, top right?



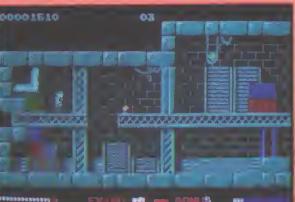
2. Well, how about if you start off by jumping on that thar packing case?



3. OK, now you can jump onto the next one - we're getting there...



4. Grasping your courage in both hands you leap into space...



5. Eek - just made it!

6. Now you turn round, hitch up your pants and...

7. Whoosh...

8. Made it! All you've got to do now is repeat that trick with the packing cases...

9. ...and Bob's yer uncle!



Your vitality meter. (You're looking a bit green about the gills at the moment...)

Collect the letters that spell out these words and you get a goodie.

Your currently selected weapon and, to the right, how much ammo you have left.

Your combat meter - tells you how much power you've got stacked up for your next hit.



impress, the same can be said of the gameplay. It starts off seeming a bit easy and shallow, but gradually escalates into a very impressive and challenging game indeed. In terms of size, it's a monster. With a total of over 150 screens to explore, you're talking about one huge game area.

The graphics themselves really are very good indeed.

Although it's all in four-colour mode, the programmers have used split-screen techniques to bump up the colour count right from the start. And there are enough hardware sprites in there masquerading as background detail to push up the number of on-screen colours to nearer twenty than four. Combine that with the high resolution of Mode 1 and you've got a console game that looks like it's playing on a 16-bit. (In fact, although the ST version's sprites are better, the Amstrad's backgrounds are miles ahead of the 16-bit machine's!)

The soundtrack plays continuously, and is original and listenable. There are no sound effects, but that doesn't take much away from the game.



## CONSOLE REVIEW

For Gremlin to use the four-colour mode on the console – especially when people are expecting spectacular new standards of graphics – is a brave choice, but once any initial disappointment has worked off, the overwhelming impression is of very subtle, and very, very good visuals which really do make the best of the new hardware.

The other striking thing about the game is its sheer size – it just goes on and on! And the further you go, the better the puzzles, the enemies and the fun factor.

If *Burnin' Rubber* on the console set new standards for driving games, then *Switchblade* does the same for platform adventures. It may not grab you by the short 'n' curly straight away, but it slowly, inevitably, sucks you in until you simply can't leave it alone. What an excellent game!

Rod Lawton

### **SWITCHBLADE TIPS**

- When you can, jump onto a crate before taking on the enemy. Most can't hurt you while you stand one level above them, but you can merrily kick their lights out.
- When entering a screen, wait for the monsters to appear. Note the point at which they generate for future reference. Try to take them on one at a time and try to get them all. Once all the monsters on a screen are dead they don't regenerate, even when you come back later.
- Take careful note of which weapon you're carrying. You can only repeat-fire after your last missile has exploded and some traverse the entire length of the screen, making them useless in close-combat.
- Avoid stepping off into space without knowing what's below. There are some stages in the game which involve large falls, and this can sap your vitality badly.
- Look out for where the vitality power-ups can be found. Plan your movements so that you pick up the energy when you most need it.
- You only jump a short distance if you leap from a standing position. Take a run-up to jump further.
- If a monster appears at an awkward place/time when you enter a screen, leave it immediately and try coming back.
- Monsters always home in on you, so use the platforms and different floor levels carefully to get them into the position you want, when you want.
- The boss monsters have particular movement and firing patterns. You'll lose energy sussing them out, but once you have even these monsters will (should!) prove easy meat.
- To make sure you're not missing out any bits of *Fireblade*, map the game as you go along. It'll pay off far better than simply trying to do it from memory, and you will find some safer short-cuts round some puzzles.
- Remember, there is no time limit, so you can analyse a problem for as long as you like.
- If you come up against a brick wall (literally), look carefully for square bricks showing more detail than the rest – you can kick these away.

### **TECHNICALLY SPEAKING...**

After playing *Switchblade* for a few days, we were so impressed we took Gremlin's technical guru James North-Hearn to one side and gave him a grilling...

We've got *Switchblade* now, we've been playing it for a few days, and we think it's really good. Yes, we're really pleased with it.

It's a very big game, as well, isn't it? It's a massive game – there's an awful lot in there.

Now we understand that you've used the hardware sprites to actually add more colours for the backgrounds?

We went to 4-colour mode because we felt that because of the size of detail, in the 16-colour mode it would not have looked anywhere near as impressive as it does. We used the stippling effect to add shading etc, which I think you'll agree works. Because we went to 4-colour mode we wanted to add more colour, so there's already – without any hardware sprites or anything – there's already two splits in it, which are noticeable at the top and bottom. And I think at most times we have at least six colours on and sometimes eight colours on screen. By splitting the screen and changing the palette, at the top, the play area and the bottom – if you count the colours you'll see there's always more than four. Because down at the bottom you've got a blue and a red, then you've got all the colours within the game. And there's also sometimes a different colour at the top. So that's easy to implement on the console. In addition to that, we added colour to the backgrounds by actually making the backgrounds out of the 16-colour sprites. So we built up the backgrounds with normal background techniques, but also added hardware sprites to add colour throughout the game.

So the sprites are in 16-colours, but you get higher resolution for the sprites, don't you, than in normal 16-colour mode in the backgrounds...?

What we didn't do is make very elaborate sprites, really big ones, and just plonk them on the screen for the sake of it, because that would have ruined the look of the game. The sprites are actually in key with the rest of the game. They fit. You can't tell they're in any way different from the backgrounds except that they're colourful. We've put sprites on every screen, so every screen contains well in excess of the normal four colours.

The thing is, we also took a look at the ST version – and we've been having a bit of a debate with the ST Format lads – but we actually reckon that the console version is better...  
...Slightly better, yeah!

#### **What do you think?**

For a start off, the product makes a very good console type of game. That's one of the reasons you think it is better, because on the ST you're aiming – in a sense – to do a different kind of thing.

Does this game format lend itself to the console hardware, is that what you're saying? Let's put it this way. The console hardware is such that we can implement that type of game as well – if not better – on the console than we can on the ST.

Is that because of things like the hardware sprites?

Yes. That's because the hardware sprites enable us to put more colours on. Also, although in this game we don't scroll the backgrounds. If we had gone to a scrolling design, obviously the console would have been able to handle that as well. We think it

came out as well on the Amstrad as a product as it did on the ST. I think the thing you have to remember is we had hindsight as well. We were able to tweak any parts that we wanted to tweak because we'd already produced the ST version. But I wouldn't disagree with you. I think, up against the two, if I could play either one of them, I would probably be more likely to play the Amstrad console version.

Well there you go – straight from the horse's mouth!  
Er, no offence, James...)



● *Switchblade*, technically, is done in the four-colour mode, but try counting the number in this screen shot! The programmers have used standard split-screen jiggery-pokery and the additional console hardware to 'cheat' on a grand scale.

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It's dark. You walk cautiously through the underground tunnels, sword at the ready. Suddenly an orc appears – automatically the sword flashes in an arc, cleaving the hideous creature's skull in two. Then there's a brief haze as the body magically decomposes into nothingness...

... Seen from the cockpit, two bandits come in fast at six o'clock. The lead spits from the barrel of the machine gun, and one of the enemy bursts into a crimson ball of fire. The other manoeuvres itself onto your tail. You try every trick in the book, but you just can't shake it off. You're hit, your vision goes red...

... Now the enemy surrounds you, pinning you down with and lobbing grenades. Your only chance is to keep moving through the hostile jungle terrain... if you can just reach the jeep...

... But a thousand oriental warriors are coming at you from all sides. The death stars leave your hands at a frightening pace, mowing them down like flies. There's a stairwell somewhere around, taking you to another equally tortuous level of the temple. But where is it...?

... Just a minute, what's going on? The scenario's a bit mixed up, isn't it? Well, yes. That's because it's not one game, but four. Quattro Combat is a compilation of four previously released Codemasters games. They're linked together through one theme: violence. All of the games pit you against overwhelming odds, which you have to overcome by inflicting all manner of death and destruction.

At under 75 pence a game, it's difficult to see how anybody could be disappointed with this compilation. Although tied loosely together with the combat theme, the games are generically different enough to make them all worth playing in their own right. All are good too, being the cream of the crop from the Codies' back catalogue.

Combat will have something for everybody. Whether you're into fantasy, planes, ninjas or straightforward warfare, there's something here to suit. Sure, the games may not be state-of-the-art, but for three quid, you get four very decent games at a very decent price.

Adam Waring

### The Verdict

Death Stalker	81%
Arcade Flight Simulator	78%
SAS Combat	68%
Ninja Massacre	81%

**AA RATING 83%**

Four for the price of one. That's value for you!

### SAS Combat

It's a jungle out there. In *SAS Combat* your soldier is taking on all comers, with a smoking gun to greet them. The game is somewhat reminiscent of *Ikari Warriors*. Your trooper has to make his way through a scrolling landscape, gunning down bad guys and lobbing grenades. There are one or two bonuses scattered around the battlefield.



• You're surrounded in the stabbing section.

odd appearance. This can be destroyed for extra points.

On reaching the end of the level, play switches to a gun-less combat section. Here the viewpoint switches to side-on, and you have to get from left to right. This time the enemy cannot be avoided, and pinpoint accuracy is needed to knife them in the guts (*ug! - ed*). This part of the game contrasts heavily



• The jeep offers good protection.

Picking these up gives you power-ups, the most useful of which is a jeep. In this, you're invulnerable against bullets, and only a grenade can kill you.

At first the game area scrolls from right to left, but at a certain point it switches to vertically scrolling.

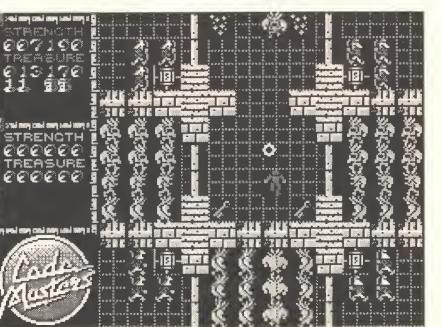
As well as soldiers to slaughter, there are gun towers to contend with. On the upwards-scrolling section a train makes the

### Ninja Massacre

*Ninja Massacre* is billed as a sort of oriental combat game. It's not a tiresome beat-em-up however, being more like *Gauntlet* than anything. One or two ninjas can join in the onslaught.

The game is huge. There are fifty levels, each several times the size of the on-screen area. There's plenty of variety, too. Some screens contain puzzles, some are mazes, and some consist of nothing more than mad, murderous mayhem!

The sprites are tiny, but there can be literally hundreds of them on-screen at once. The little chaps can move very quickly indeed at times. As they reach the edge of the screen, it scrolls, revealing more of the playing area. The maps are made from walls, doors and a variety of other features. On each level you have to



• How ever many you kill, they keep on coming!

find a stairway down to the next level. Sometimes it's quite straightforward to find this exit, but it can be more profitable to explore more of the level in the hunt for food to top up your rapidly-decreasing life counter.

As well as grub, there are many other collectables scattered around the levels. Treasure chests give you extra points. Keys allow you to unlock doors. Scrolls allow you to use a magic spell that obliterates all monsters and generators on screen when used. Other icons affect the way your bullets work, make the monsters run away, or give you invulnerability for a short while.

With a single player it's quite a challenge, but the fun really starts with two players. Here you can work either as a team, or against each other. You need to co-operate in some instances – the screen will only scroll so far, as it has to accommodate both players.



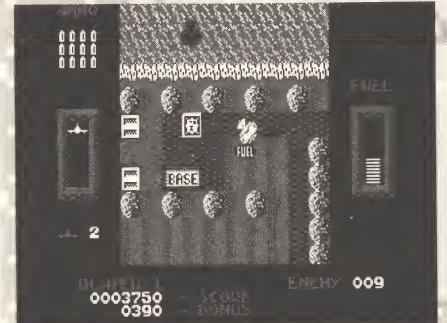
• Blimey! There's a lot of monsters and no mistake!

### Arcade Flight Simulator

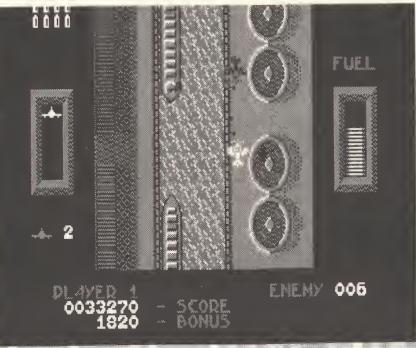
*Arcade Flight Simulator* sees you in the cockpit of various warplanes spanning the three world wars (we're yet to have number three). In WWI you're flying early biplanes. WWII puts you in control of that ace of aces, the Spitfire. Things are up to date in WWIII. Here you're in a modern jet fighter, complete with missiles.

There are three missions to complete, each in a plane of a different era. The first has you taking off from an airstrip from the green fields of England. You have to destroy shooting ten enemy planes out of the sky before returning to your airbase and picking up a bomb, and dropping it on top of the enemy camp.

Level Two has you taking off from an aircraft carrier. You have to do exactly the same thing as in the first level, though – pot ten planes, collect bomb, and blow the base.



• That's the enemy base, but you can't bomb it 'til you've got all the planes.



• Acka! Acka! Acka! Shoot 'em out the sky.

Level Three's jet fighter scenario is set in the desert (topical, eh?). Apart from that it's exactly the same plot with different sprites. It does get tougher as you progress; there are more enemies on screen at a time.

Fuel runs out quickly whatever you're flying, so you need to visit the fuel dumps that are scattered around. Flying low over them tops up your tanks. Bullets need replenishing too. For this you need to head back to base and land.

It's not easy to shoot down the planes. Not only do your bullets have a very short range, but the planes can fly at different heights, represented by the size and detail of the sprites. You have to be at their level to shoot them down, and, of course, they shoot back too!

Because of the nature of the game, the sprites are very small. At low heights they're little more than a tiny cluster of pixels. They do get more recognisable as they gain altitude, though. It can sometimes be hard to see exactly what's going on against

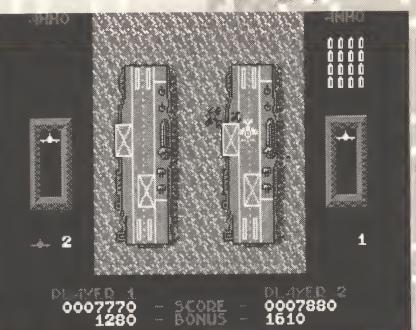
the background. Bullets are particularly difficult to spot, so a careful lookout is necessary.

Sound is good. The fx change with each type of plane. The early gunfire from the biplanes in the first level change to the rasp of machine guns in Level Two. This changes again to the swoosh of missiles when at the controls of the jets.

There is a two-player game which is very different from the single-player mode. There's no mission to complete and the screen doesn't scroll. The two planes re-enter the wrap-around screen on the opposite side when they fly off one edge.

It's a player on player dog-fight, and like most two-player games of this type, is extremely simple, but provides endless hours of entertainment.

*Arcade Flight Sim* is hardly that, but it's an excellent airborne blast nonetheless.

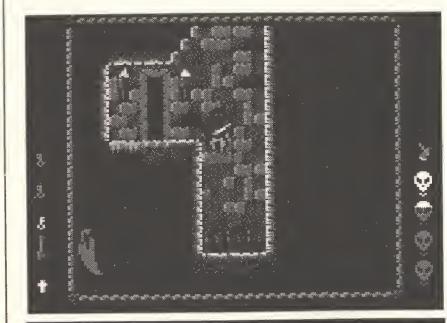


• Dog-fighting is great fun in two-player mode.

### Death Stalker

*Death Stalker* whisks you away to an ancient world filled with magic and monsters. Your warrior is (at first) equipped with a sword with which he can chop the orcs and undead skeletons to pieces.

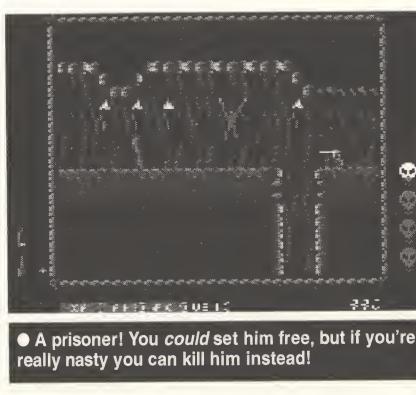
The quest is to go down deep into the bowels of the earth and rescue several pris-



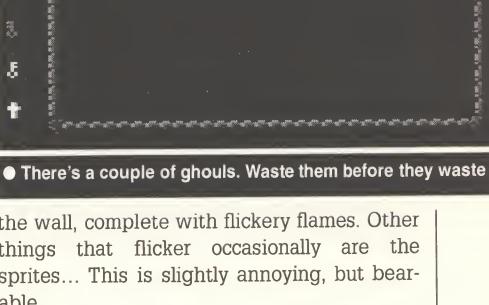
• Aaarrgh! A pit trap means your days are over!

not poisoned.

The graphics are wonderfully atmospheric. Up above ground, tall trees and towers make up the background. Enter the earth, and rocky caverns and rough-hewn passages are drawn brilliantly. Torches burn brightly on



• A prisoner! You could set him free, but if you're really nasty you can kill him instead!



the wall, complete with flickering flames. Other things that flicker occasionally are the skeletons... This is slightly annoying, but bearable.

The tune that accompanies the game adds even more to the atmosphere. It's very catchy and goes very well with the game indeed.

*Death Stalker* originally scored 72% back in AA41, it is the only game of the foursome that has been reviewed in AA before. The rating is probably a tad low for such a polished budget game, which explains why it's being given a whopping 81% this time round. Ah, nostalgia...



## ACTION TEST

### BUMPY

Loriciel • £9.99 cass, £14.99 disk joystick/keys

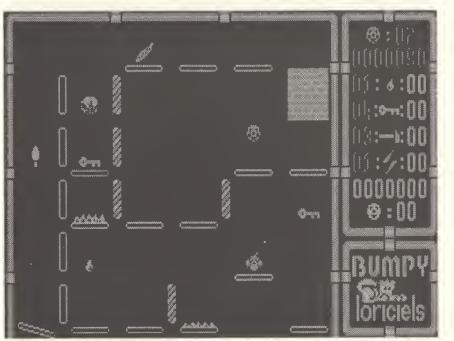
Today you're a smiling-faced bouncy ball. Unarmed and totally harmless, your little task is to bounce yourself around a succession of screens, collecting points as well as many other useful, er, things (such as hammers, pieces of fruit and so on). To be honest, the game looks old. (But it does play better than it looks.)

The first thing to do is to work out how to move. Normally, your little ball (aka Bumpy) isn't very bouncy at all. He wobbles up and down with hardly the power to move about the screen. However, if you press the Fire button, you can jump as high as you want. This facility is, as you'll soon find out, remarkably useful.

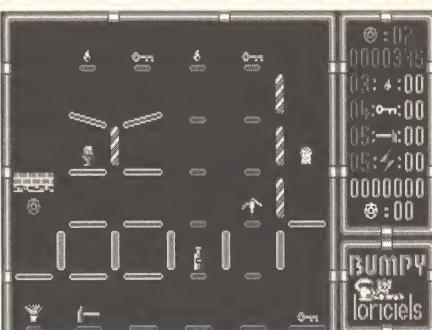
The idea is to move from platform to platform, collecting all the items which appear. These items give you special properties, such as the ability to knock down certain walls or put out the fires which occupy some of the

mustn't be wasted, because they'll definitely be needed on later screens. So it usually isn't worth leaving items lying around in order to get off a screen safely. Best to go and get them; they're sure to be very useful later.

Graphics are not very advanced. You are just a small smiling face, the platforms are just platforms and the collectables look like what they're supposed to be; little hammers, pieces of fruit and so on. To be honest, the game looks old. (But it does play better than it looks.)



• Working out which way to go is always tough.



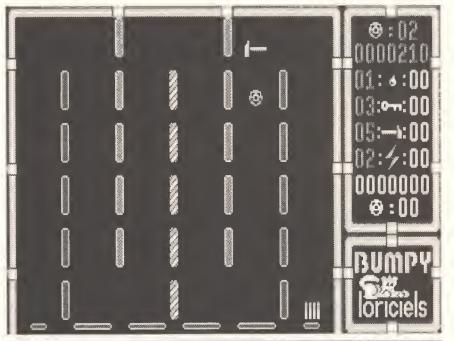
• Bumpy destroys a wall with his head. How cute!

Loriciel has programmed. Some certainly are fiendish. You only have three lives, and if you lose the lot, you return to the beginning of the game, no matter how far you've progressed. It is virtually impossible to get through 100 screens of difficult bouncing with this few lives. It would have been better to give Bumpy a new set of lives every three or four levels. Instead, the apparent hopelessness of the task hardly inspires you.

Something else we should point out is that Bumpy wouldn't run on our new 6128 Plus. There would appear to be compatibility problems with some software, and you can be sure we'll keep you posted on this.

Bumpy is a nice idea, but when you look closely you realise that it is just a simplistic platform and jumping game. In comparison with the other excellent examples around, it almost starts to look like a budget game.

James 'Bouncy' Leach



• Bumpy is bouncing his way towards the hammer.



### The Verdict

#### GRAPHICS ..... 52%

- Very simple.
- No complexity needed, though.

#### SONICS ..... 47%

- Bouncing sounds. Well, what would you expect?

#### GRAB FACTOR ..... 55%

- Nice idea. Quite a few interesting puzzles at first.
- There isn't a great deal of variety, though.

#### STAYING POWER ... 56%

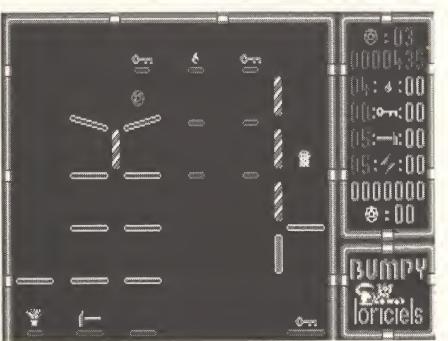
- Not easy. The similar puzzles cause interest to flag.
- The editor function provides a neat option.

#### AA RATING ..... 54%

- Not bad, and editing your own screens is fun, but you'll tire of the whole thing far too soon.

platforms. When you've collected the required number of items, an exit point opens somewhere on the screen. You must bounce your rotund little self through this, and on to the next level.

What makes the game difficult are the numerous traps and tricks on each screen.



• Hit the tilted platforms and you'll bounce forever.

Some of the platforms melt when you bounce on them: others are tilted, so that when you land there, you are automatically sent in a pre-defined direction. You obviously have no control over where you end up. This is how some of the traps are set up; if you don't land on exactly the right platform, you can fall and be bounced between two angled platforms, which are facing each other, for ever. It must be said that this can get a tad annoying.

As you get through the screens, you keep all the collectables you've picked up. These

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There are also seven minor nations, which are either too disunited or too backward to pose a threat to the major powers but which can be useful in forming alliances or trading pacts.

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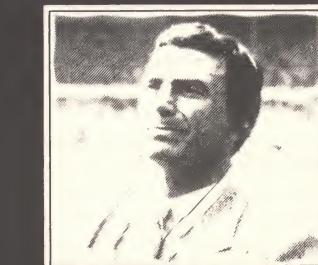
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## MAGIC LAND DIZZY

Codemasters • £2.99 cass  
Joystick/keys

Old Egg-head's back! *Magic Land Dizzy* is the fourth in the *Dizzy* trilogy. The games depict the adventures of a rather unlikely hero - a walking egg who wears boxing gloves. The *Dizzy* games are in the arcade adventure mould. A series of problems have to be solved to get further into the



● There's Dozy, but he's fast asleep.

magic world, and is determined to take out revenge on our hapless hero.

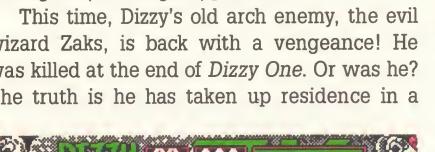
The way he has done this is the way that will trouble Dizzi the most.

All Dizzi's friends have been taken hostage, and by magical means are trapped! Dylan has been turned into a tree. Denzil has been frozen. Dozy is in an enchanted sleep. Grand-Dizzi has been locked inside a magical mirror. Daisy has grown to the size of a house. Dora (a new character) has been turned into a frog! Dizzi has to rescue all the yokl folk and then kill the evil Zaks - this time for good!

Dizzi starts his quest at Weird Henge. At first, all directions seem closed. Wherever you may wander, the hazards seem to be impassable. After a bit of bold experimentation, and a lot of lost lives, however, you'll figure out how to get past some of those early puzzles.

●

game - just like a traditional adventure. However, it's not a case of typing in reams of boring text. Everything takes place in a graphical environment - it's a platform game in essence. The combination of the two requires accurate arcade skills and the ability to work out logical (and illogical) puzzles.



● The rat looks pretty hungry to me...

This time, Dizzi's old arch enemy, the evil wizard Zaks, is back with a vengeance! He was killed at the end of *Dizzy One*. Or was he? The truth is he has taken up residence in a



● Just how do you take the sword from the stone?

●

### ACTION TEST

coins as a sideline, there are jewels for the taking instead. These are beneficial in more ways than just adding to your score - they boost your energy levels as well.

Graphics are once again four-colour Speccy ports. Dizzi himself is the only multi-coloured sprite. All the other graphics are solid red, green or white. This colour coding does have a couple of advantages, though. It often gives clues to where it might be possible to make progress later on.

A jolly little tune plays throughout the game. It fits well into the cartoon nature of *Dizzy*, and ultimately becomes annoying. Then again, that's what volume controls are for!

### SECOND OPINION



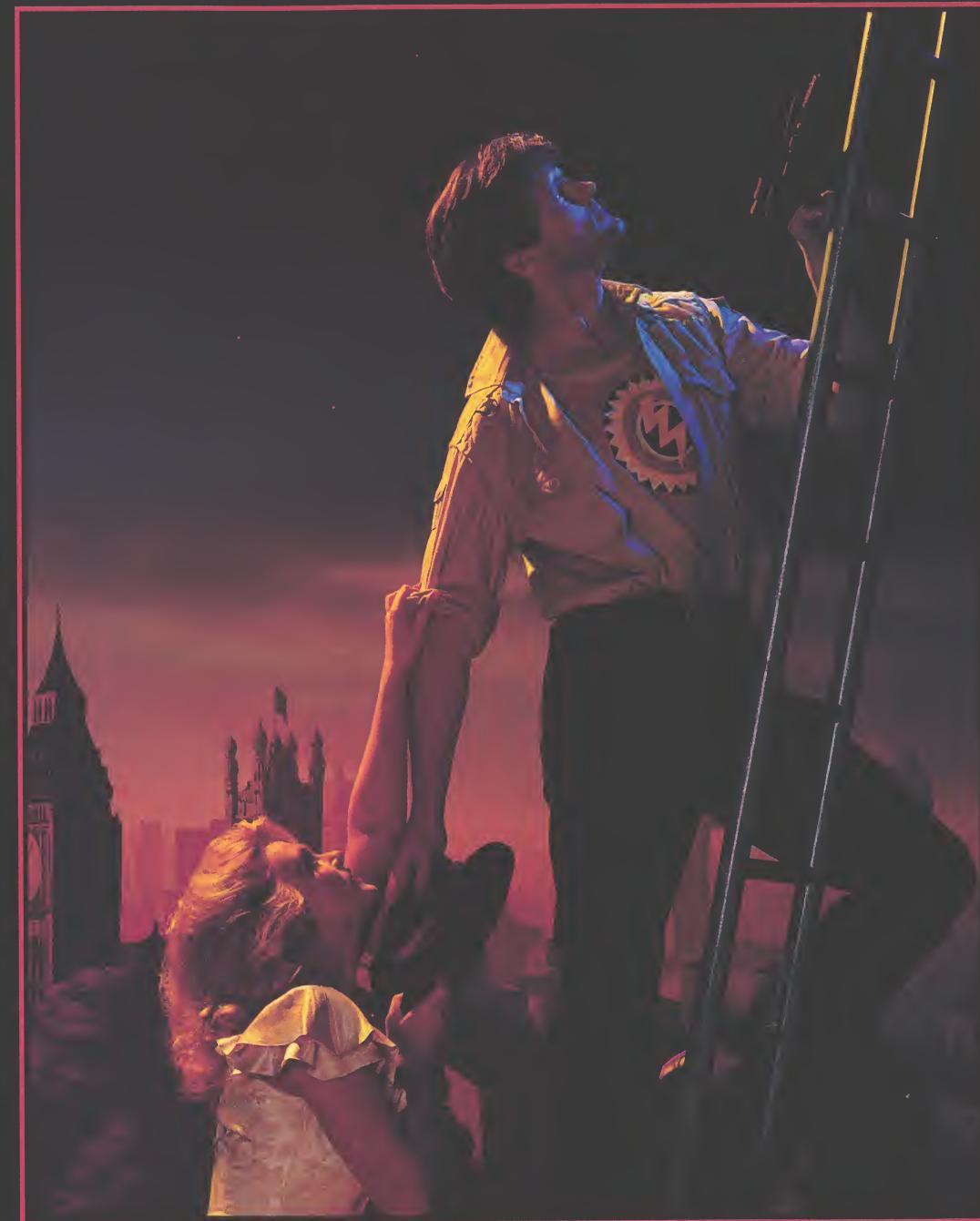
*Honey, I'll be back in a flash*



BACK IN A FLASH FOR COMMODORE 64, SPECTRUM, AMSTRAD,



*Keep it warm Honey!*



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## ACTION TEST

### THE SPY WHO LOVED ME

Domark £9.99 cass, £14.99 disk  
joystick/keys

Anyone seen a submarine around here? The British Navy has lost one, it seems. It's big, grey and full of men with beards. It must have rolled off the continental shelf and disappeared under the sea-bed. Oh well. It'll probably turn up soon, covered with fluff.

And anyway, we aren't the only people careless with their top-of-the-range nuclear powered ballistic subs; the Soviet Navy has also misplaced one. Hmm. This calls for unprecedented co-operation between East and West (this is pre-perestroika, remember).

#### SECOND OPINION

'Spy Who Loved Me on the CPC looks almost as good as the 16-bit versions, which isn't saying much, unfortunately. It's pretty enough, nonetheless, but the awful control stops it assuming any real playability.' RL

The Russian have assigned gorgeous pouting Anya Amasova (translated, this means Helpless Female) to this tricky case. And the plucky Brits have sent James Bond. He suspects that the only evil, twisted mind capable of this large-scale theft of military undersea vessels belongs to Karl Stromberg. Consequently, Bond and Anya set off to visit this power-mad despot in his underwater fortress, Atlantis.

This is where you come in. You are now Bond, or rather Bonds' ageing Lotus Esprit. You must drive along a winding road with more traffic cones on it than the M25. The scenery is scrolling vertically past, and the course gets ever more tortuous. To add to the fun, other vehicles belt towards

you in the middle of the road. Avoid them, keep off the verges and send the cones flying.

Also littered around are large letter 'Q's. These must be driven over and collected. They can later be traded in for specialised equipment from Q's gadget workshop (assuming you get there). As well as all the other hazards, there are puddles on the road. Lotus's legendary handling appears to leave a lot to be desired as, every time you encounter a puddle the car spins out of control for a few seconds.

You'll eventually reach a pier. The car doesn't dive into the water like in the movie. It trundles to a halt and you both get into a small motor-boat.

The scrolling game continues. You chug off in the little boat. It is as hard to control as the car. But at least it is armed (albeit with a largely ineffectual missile launcher). You move the boat in exactly the same manner as the Lotus, and it responds the same way.



• James makes a tactical foray onto the verge.



• Rendezvous with the Q-Truck to buy equipment.

There are a great many piers and jetties to avoid. Some lead into blind alleys and cause you to explode horribly. The sea is littered with little buoys, other boats and more (waterproof) Q tokens to collect.

Once you have negotiated the hazards and headed out into the open sea, you are magically transported into the Lotus once more. It's with a sense of déjà vu that you begin driving along a vertically-scrolling road, avoiding cars and traffic cones and collecting Q points. The main difference is that this time you must rendezvous with the Q-Truck. Drive up into the back of it, and you can equip your car with a variety of weapons. Each costs a certain number of tokens. So that's what they're for...

The scrolling is pretty smooth, and there is a wealth of detail on the screen during the Lotus-driving sequences. What lets it down is the control. The car feels like it's driving on ice. And when you hit a puddle the control goes completely wild. The most successful way to get round this problem is to go very slowly indeed past the puddles. Yes, yes, I know that Bond wouldn't be seen dead driving like an arthritic snail round a measly puddle. But the alternative is to crash.

Whenever you do lose a life, you start either back at the beginning of the level, or at about half way through. Naturally, this is terrible news if you've struggled for ages and have almost got on to the next level.

The sound is a bit sparse. There are no car or boat noises, but a scuffing can be heard when you drive off the road. Other effects occur when you hit things.

Overall, *The Spy Who Loved Me* isn't very fulfilling or satisfying. The link with the actual film is tenuous, and although the graphics are smooth and nicely drawn, they don't make up for the lack of gameplay.

James 'not Bond' Leach

#### FIRST DAY TARGET SCORE

Get to the helicopter on Level Two

#### The Verdict

##### GRAPHICS ..... 78%

- Smooth, detailed, colourful.
- The main sprite is a little small, though.

##### SONICS ..... 59%

- Not much, really.
- What there is fits in nicely.

##### GRAB FACTOR ..... 64%

- Initially challenging and addictive.

##### STAYING POWER ... 41%

- It gets very monotonous.

##### AA RATING ..... 52%

- There isn't enough variety.



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## ACTION TEST

### MIDNIGHT RESISTANCE

Ocean • £10.99 cass, £14.99 disk joystick/keys

When your entire family (including Grandpa, the eminent scientist) have been captured by a ruthless gang of international terrorists, there's just one thing for it. Peace talks through a United Nations envoy? We think not. The only way to negotiate with people like this is with a smoking Kalashnikov.

Your mission is to move in, and move them out. If you don't, the terrorists will force Gramps to build a big bomb and blow up the world (or arrange something equally catastrophic).

You're on your own from here on in, (the arcade version had a two-player mode), and have to make your way through the hordes of

mechanised megalomaniacs with only a gun for company.

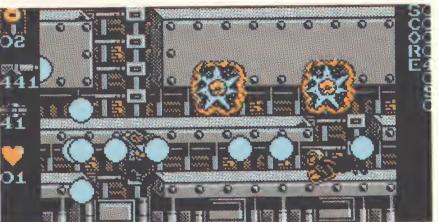
*Midnight Resistance* is a walk-along-the-platforms-and-shoot-everything-that-moves type of game. The difference is that the ways in that you can make your enemies die horrible deaths are far more varied than in other games of the genre. For a start, your weapon can spit lead through a full 360 degrees. It's also possible to crawl through tight passages, still spraying this circle of death as you go. Baddies



• Hitch a ride on the jeep at the start of Level One.



• Take out that laser tower before making progress.

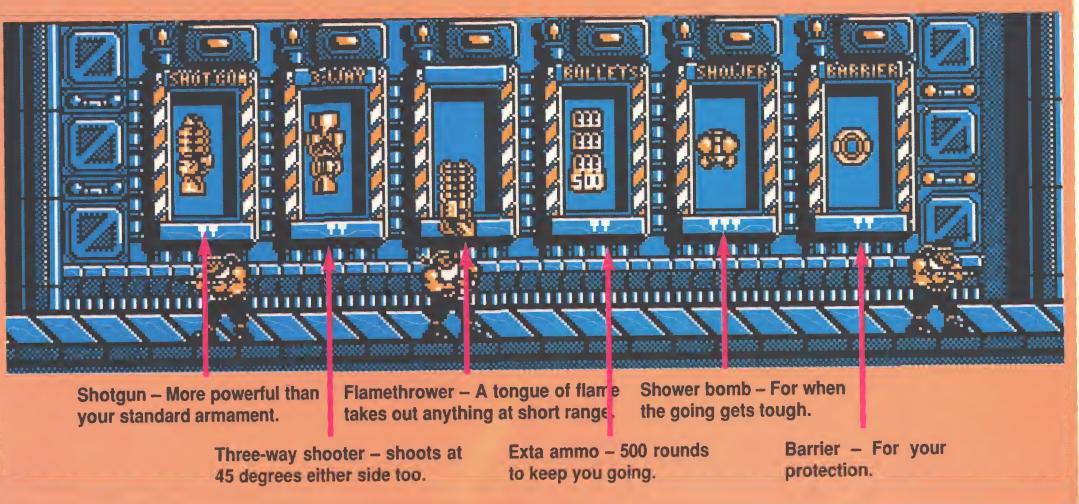


• The power-ups give you some serious firepower.

### THE WEAPONS SHOP

(End of Level One)

Here you can use all those keys you've collected to upgrade your firepower. The number of keyholes tells you how many keys you'll need.



Shotgun – More powerful than your standard armament.

Flamethrower – A tongue of flame takes out anything at short range.

Shower bomb – For when the going gets tough.

Three-way shooter – shoots at 45 degrees either side too.

Extra ammo – 500 rounds to keep you going.

Barrier – For your protection.



• Level Three: Doesn't look too pleasant outside...!

### LEVEL ONE

(Don't worry about picking up all the keys, by the way – you can only carry six anyway.)

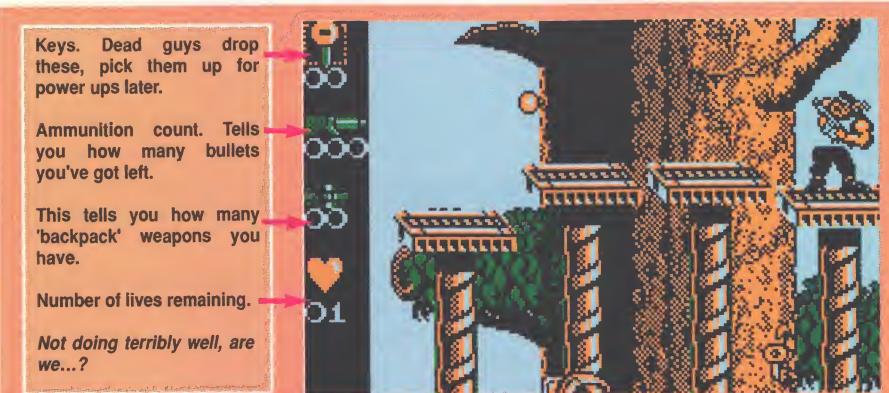


Use the jeep as protection as you travel along the road. You can stand on top as it rolls over the enemies.

The action is depicted in the Amstrad's four colour mode. The sprites are fairly large and well detailed. Backgrounds, too, are good. The lack of colour can cause problems, though, and you can easily get confused as to what's actually happening. Green Screen owners beware!

Suitably futuristic music plays on the title screen, but in the game proper, sound is sparse. Just the usual explosion and shooting sounds, with little else.

The window in which the action takes



place is fairly small. Presumably, this has been done for speed, but to little effect – the game still plays at a sluggish pace. When the edges of the tiny window are met, the playing area is page-scrolled to reveal more of the map.

*Midnight Resistance* is playable enough, but nothing really special. It has lost many of

### SECOND OPINION

*Midnight Resistance* is an arcade game that lacks that principal arcade element – speed. Playable enough, however, once you get used to its slower pace of life. Also, the graphics get cluttered and confusing from time to time.

RL

available? Perhaps it's the prospect of nine large levels to fight your way through? Whatever it is, it'll keep you playing well into the early hours. By midnight all resistance is useless...

Adam Waring



FIRST DAY TARGET SCORE

Reach Level Three

### The Verdict

#### GRAPHICS ..... 72%

- Good use of the four-colour mode.
- Sprites get a bit lost at times.

#### SONICS ..... 61%

- Reasonable title tune.
- Not many in-game effects.

#### GRAB FACTOR ..... 73%

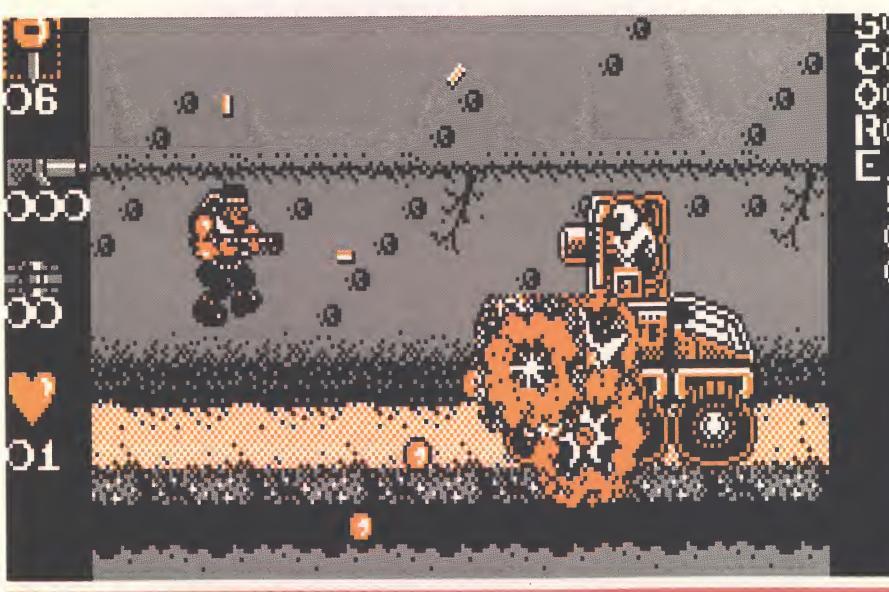
- The action starts immediately.
- Slow...

#### STAYING POWER ... 84%

- Plenty of attractive weapons.
- Surprisingly addictive despite the sedate pace.

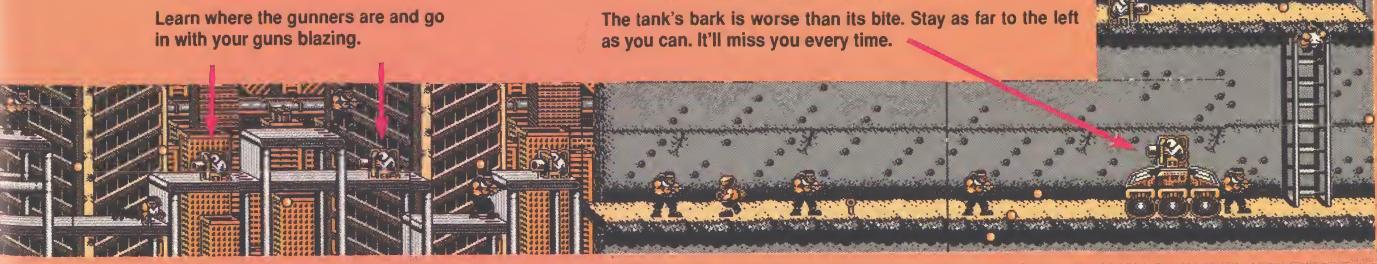
#### AA RATING ..... 77%

- A slow-moving but very playable game.



• End of level tank. Keep your finger on the trigger!

Learn where the gunners are and go in with your guns blazing.



The tank's bark is worse than its bite. Stay as far to the left as you can. It'll miss you every time.



# The AA Chrimbo page

You thought we'd forgotten, didn't you? Never! Here's a special festive page just for all those readers bloated with Christmas pud, sozzled by sherry and fed up to the back teeth of listening to Auntie Maude describing her hernia op over the stilton...

Last year we let you have a sneak preview of the AA team's Chrimbo pressie lists. And we're delighted to be able to do the same this year (send the wrts to the usual address).

#### Ollie Alderton

- 1 Some yellow crayons
- 2 Some red crayons
- 3 Some green crayons
- 4 In fact a whole variety of crayons
- 5 Something to put them in  
No, wait a minute. Start again...
- 1 A villa in St Tropez
- 2 A very powerful pair of binoculars...  
(OK, you can stop right there - ed)

#### James Leach

- 1 A year's membership of MENSA
- 2 The collected works of Leo Tolstoy
- 3 A BMW M635CSiA (plus heated gear knob)
- 4 A soul-mate (you mean cell-mate - ed)

#### Adam Waring

```
10 INPUT "HOW MUCH MONEY WILL YOU GIVE ME";M
20 IF M<1000000 PRINT "NOT ENOUGH, YOU MISERABLE
CHEAPSKATING GIT!":GOTO 10
30 PRINT "ABOUT BLOOMIN' TIME!"
```

#### Rod Lawton

- 1 A case of Moet et Chandon '63
- 2 2 gross finest Havana cigarillos
- 3 A whole plucked pheasant (oops, close one)
- 4 6cwt Christmas pudding plus 142 quarts double cream
- 5 A stomach pump

## THE AA PERSONALITY QUIZ

Yeah, c'mon, you don't just get these in *Cosmopolitan* y'know...

Here's your chance to probe the innermost depth of your psyche in our specially-constructed quiz, assembled by a team of expert psychoanalysts specially recruited from the pub next-door.

What you have to do is carefully read the questions, then note the answer that most closely corresponds with your own personality...

1. Your CPC breaks down on Christmas eve. Do you:
  - (a) Smash it with your joystick until it works?
  - (b) Phone Adam immediately, getting him out of the bath?
  - (c) Use a process of elimination to track down the cause?

2. Your granny asks you to explain *Laser Squad*. Do you:
  - (a) Blow her up with an auto-cannon?
  - (b) Find the manual and explain it as you play?
  - (c) Admit you've never heard of it?

3. You're pushing a trolley through Sainsbury's car park and collide with a Battledroid from Zog. Do you:
  - (a) Smack it in the trunnion widget with your trusty thermic lance which you just happen to have with you?
  - (b) Be rather surprised and wonder whether you ought to tell someone?
  - (c) Dismantle it in the search for components for your ROM board project?

4. You're watching the Queen's Speech and your TV goes fuzzy. Do you?
  - (a) Assume it's Prince Philip?
  - (b) Phone the BBC?
  - (c) Stop fiddling with the telly?
5. You see Trenton Webb walking down the road. Do you:

- (a) Run away in a zig-zag pattern and dive into the nearest bush?
- (b) Say, "Hello, aren't you Trenton Webb?"
- (c) Offer to show him your collection of screwdrivers?

6. *The Great Escape* is on the TV again this Xmas. Do you:
  - (a) Run out into the road and scream?
  - (b) Watch it anyway, because it's not that bad really?
  - (c) Change channels to watch the documentary on recirculating trunnion spigot flanges on BBC2?

## YOUR SCORE...

For each (a) answer, award yourself 0 points. For each (b) you should give yourself 2 points and for each (c) 4 points. Now add up your score and check the assessments below to find out just what sort of CPC owner you are:

<0.000001 There is nothing wrong with your brain that a small series of controlled explosions wouldn't put right.

0-8 You are a true games player who relies on sheer instinct and reaction time rather than any vestige of intellect.

8.0001-15.999 You are inclined to be pedantic. Your answers indicate a serious and common-sense approach to life which could get you into trouble in some parts of South America.

16-23 You are but one step away from being a trainspotting propellorhead. Have a care!

24 You are Adam Waring

>24 You are seriously innumerate. We suggest you immediately enrol on a maths course at your local college. Have you ever owned a Spectrum?



## THE AA CHRISTMAS CAROL

To be sung to the tune of 'God rest ye Merry Gentlemen...'

We love you Amstrad A-A-Action, you're first place on the grid  
On matters CPC-concerned, you really lift the lid  
In fact we think you're such a mag,  
We'll send you sixty quid

And it's Ty-y-pe-Ins of comfort and joy, comfort and joy  
And it's Ty-y-pe-Ins of comfort and joy

We love you Amstrad A-A-Action, you are so very funny  
With you upon our shopping list, the outlook's always sunny  
In fact it seems a good idea  
To send you all our money...

And it's Ty-y-pe-Ins of comfort and joy, comfort and joy  
And it's Ty-y-pe-Ins of comfort and joy

We love you Amstrad A-A-Action, we're always on the phone  
To tell you what a job you're doing, and that you're not alone  
In fact we'll send you all our praise  
And everything we own...

And it's Ty-y-pe-Ins of comfort and joy, comfort and joy  
And it's Ty-y-pe-Ins of comfort and joy

N.B. Repeat as necessary

# Balrog

releases... updates... previews... new releases... updates... previews...



NEWS...  
NEWS...  
NEWS...

Oops!

In a recent AA the *Adventure Probe* awards were mentioned and it was stated that Ken Bond's game *The Island* was awarded 'Best text only 8-bit adventure of the year' - this is, of course, not true! Although *The Island* is a great game, the award was actually given to Ken's adventure *The Test* - Sorry Ken! Fans of Ken's should look out for his latest game which is, I am reliably informed, ready now. Called *The Spiro Legacy*, it is a two-parter PAWed game and costs only £4.50 (disk-only). The Balrog has been given a sneak preview and it looks to be Ken's best yet. Look out for the review soon. More details can be obtained from Ken at 17 Adel Park Gardens, Adel, Leeds LS16 8BN.

## BALROG'S POST

### ● The definitive adventure round-up?

I'm writing to tell you all about a series of articles I have written about all the known adventures still available for the Amstrad. These articles will appear in *Spellbreaker* from the January issue (No. 23). These will appear in the form of game description, mentioning the cost of each game, whether it's available on tape/disk and the address of the author or place available.

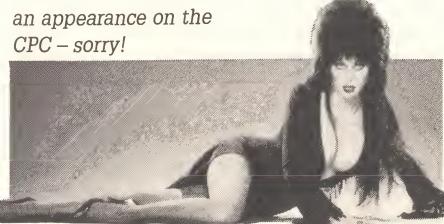
I think this will be a valuable service for new adventurers wanting to know where to buy games, as nearly all the software houses have withdrawn from the 8-bit adventure market.

I'm in regular contact with about a dozen authors at present and would gladly expand that quota, so if anyone wants their games mentioned in this series could they please write to me, mentioning prices, availability and giving me a short scenario of the game.

Tragically, many good authors have given up writing in the past because of lack of reviews - or not being given any magazine space (especially in the Pilgrim days...) and some really good games have been lost for ever. I don't want to see this happen again...

Mark Eltringham  
39 Gargle Hill  
Thorpe St Andrew  
Norwich, NR7 OXX

Elvira will not make  
an appearance on the  
CPC - sorry!



What a great idea, Mark! It always is useful to know where to buy those old games from. More details can be obtained from Mike Brailsford (*Spellbreaker* editor) at 19 Napier Place, South Parks, Glenrothes, Fife KY6 1DX or call 0592 757788.

### ● Where are they now?

Were the Infocom games *Plundered Hearts* and *A Mind Forever Voyaging* ever released for the CPC?

Peter Captijn  
Holland

Officially no, although I have heard rumours of a Mac version of *Plundered Hearts* running on the CPC. (Strange but true!)

Stephen Wilson  
Lancashire

### ● Calling all home-brewers...

I would like to hear from any home brew authors interested in a free review and advert in an electronic fanzine. No adventure turned away. Articles and contributions also wanted...

Simon Netherwood  
Rastrick

Sounds very interesting, Simon! Simon can be contacted at 36 Toothill Bank, Rastrick, Brighouse, West Yorkshire HD6 3EZ or telephoned on 0484 719326 5-9m weekdays. Don't forget to send me the final fanzine for a look!

## Competition Results

The massive Balrog Birthday comp certainly was popular, even if it was printed incorrectly first time around! Out of the thousands of entries (OK, OK, perhaps I'm exaggerating a little!), the following lucky people were picked:

Mike Riggall, Lincolnshire • Gareth Jones, Edinburgh • Joan Pancott HPig, Weymouth • Sue Illey, Prestbury • Bob Adams, Welwyn Garden City • S Marini, St. Annes • Stephen Borner, Doncaster • Ben Isba, Bowdon • Lorna Patterson, Tillicoultry • K Hankin, Aldridge.

All win copies of *Castle Master*, *Lords of Chaos*, *Bloodwyche*, *Computer Adventures - The Secret Art* and a years subscription to the Adventurers Club Ltd. Mike Riggall's name was first out of the shoebox so he also wins an ADLAN ROM and a year's subscription to both *Adventure Probe* AND *Adventure Coder* - pheeww! Well done, Mike.

The answers? Well, role-playing games on the CPC are few and far between but *Bards Tale*, *Swords and Sorcery* and *Rings of Darkness* are all examples of accepted answers. Incentive produces *GAC (Graphic Adventure Creator)*, *ACL* was started in 1985 and the Balrog first started writing for AA way back in AA50 (way before Rod, Adam and James!) (Er, excuse me - at the same time as me and Adam, actually! - ed)



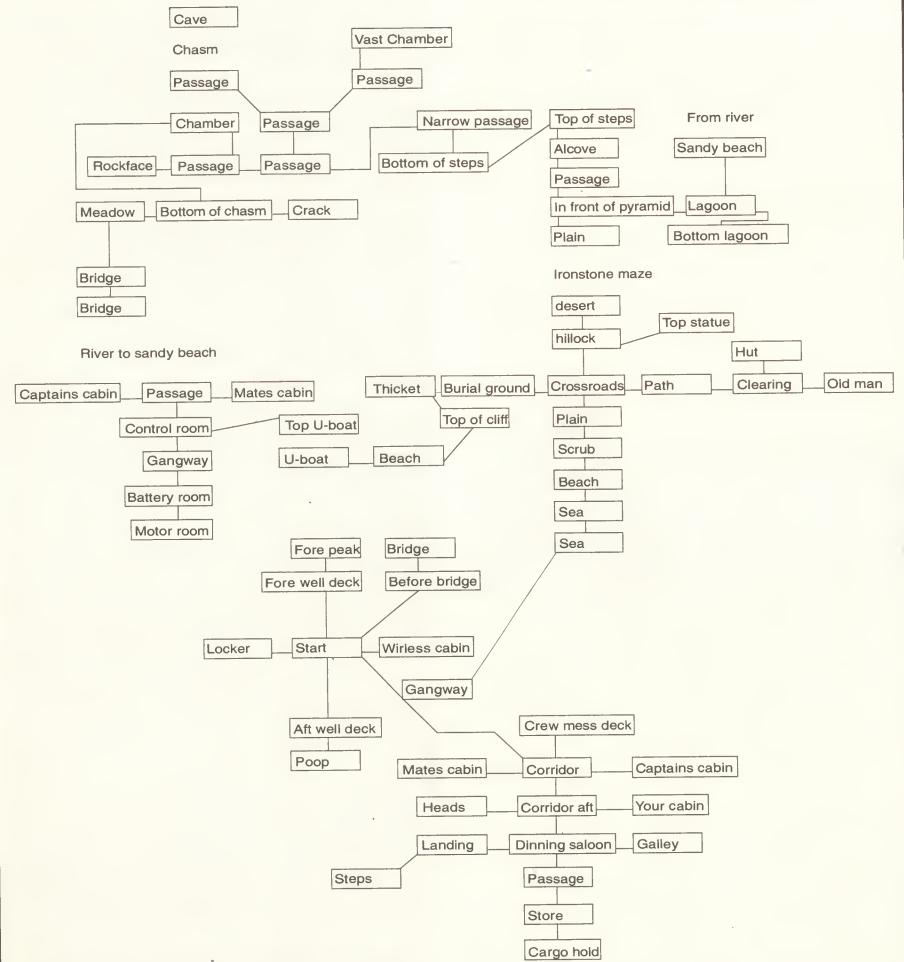
# Clue Sniffing with the Balrog

A real stocking-filler of clues this month to take you through the Christmas holidays! A Ken Bond special this month, with tips for all of his games including a map of *The Island* drawn by Ken himself...!

Note well the names of the people below for they have come to you in your hour of need to aid and comfort you with their knowledge:

Ken Stokoe, Northumberland  
Antcrusher, Seventh Plane  
Jerome Young  
Dave Harvard, Fareham  
Jungle DJ Towa Towa, Leeds  
Debby Howard, London  
Alistair Crook, Leeds  
Simon Avery, Chudleigh

## MAP OF THE ISLAND



Howard Swains and Ian Howlett

### Base

- To play tape: Find car, turn deck on, put tape in, press Play. (The hi-fi is a red herring and will only result in your death.) (*A dangerous herring! - Balg*)
- The combination for the safe in Part 1 is right 6, left 5, left to 3.
- Get key-ring with broom handle.
- Stick the photo in the space on the pass. To get the light to work, turn switch on.

### Cutthroats

- In the deep wreck, prop up the bunks with the iron bar.
- In the shallow wreck, to find some air, connect up the bottle and the compressor, then "fill tank with air". (This is a rare, fussy input from Infocom!)

### Dodgy Geezers

- Search the shop with pets for some cure for canine distemper.

- Follow the advice on the matchbook.
- Ask for a book on sewers (?) in the library.

### Dungeon Adventure

- Drop things on sleeping giants from up in the tree. This gets you a girdle of giant strength. Just the job for all those cluttery things adventurers just can't do without!

### Grange Hill (especially for the Kenderian)

- To get into school, use chair leg, "break lock".
- Give a dog a bone.
- You need the Plane to get the Matches.
- Don't bother to cross the canal, you reach it from the other side later in the game.
- Climb up the phone box.

### Heavy on the Magick

- At the start, do not pick up the book of spells as it is smeared in poison.
- To get into wolfdorp, say "DOOR, WOLF"
- To be raised to the grade of zelator, go to the door in secunda porta and say "DOOR, SILENCE"
- Mirror kills medusa.
- Nugget kills werewolf.
- Pellet kills slug.
- Garlic kills vampire.

### Island

- Turn the picture frame around to get the brass key, and use it to open the locked cabin.
- Put card in gap to gain entry to the captains office.
- Cut the hawser holding up the gangway with the axe to get down to water's level.

### Panic Beneath the Sea

- Push the book to make an exit.

### Price of Magic

- The candle is for the SPY spell.
- The grimoire is for the MAD spell.
- Burn the woodpile with the candle to get ashes (used for ZAP spell).
- Wave the mirror at moonbeast.
- The wheel is for ZED spell (the bat will get the wheel if asked).

### Suspect

- Hide behind comfy chair in library and wait.
- Follow the colonel after you see him in the library.
- Put body in window box to add more time.
- Hide behind BMW and wait.
- Open trunk of BMW.
- There is a way past the dogs!

### Test

The correct order for the buttons on the first wooden door is 285953719. Once inside, get cane, put letter in cane and light letter on elec-

tric fire. Then melt the nylon rope... (and run!) Fire the gun at the hump (it's a mine).

### Ingrid's Back

Robin Harley and R Melody offer help with Stephen Borner's problems:

- To open safe: Drop some evidence, E, get letter and hide. Wait for Jasper, examine Jasper (he then slides portrait and enters combination), get out, slide portrait, 888155 and get anything inside safe.
- To get into Jasper's Bedroom: From reading room due west of Entrance Hall - Ux3, Ex2, in, N, out (In here you must press record when telephone rings, get tape and get photo from wallet).
- To get into Jasper's office: Go to Entrance Hall with Daisy, open door, Daisy, "out, wait 2, knock, wait 2, knock". When Daisy goes out the door, close door, U, wait until butler goes down, S, get paper, drawer and then stubs.

### Lord of the Rings

Chris "The Barbarian" Gore from Mallow has the answers to Stephen Borner's questions:

- To get out of the old forest, after coming out of the tunnel into the mossy part of the for-

est blow out the stub of the candle, go E. If the trees block your way then wait till they move. From the Mossy place go Ex2, SE. This will get you out of the old forest, from there go S, NEx2, ask Tom Bombadil for help, SW, ask Tom for help, NE.

### Tombestowne

Zac Taylor from Bristol has sent in clues as requested by Paul Stores:

- Get grey key from the bathroom next to the Master Bedroom. Get book from Master bedroom. Go to library (1st floor) with book, go to the left of the room, walk right and jump. You're now in the secret passageway. Go to the armoury, go to the bottom of the barrels and jump up and get shield. Go to hall. Go outside to "By the Bench". Drop book, go in tower to "End of Battlements", drop shield: this stops the arrows. Enter "Hut" and get rope on the table. Go out and go to the "Well", get bucket, drop rope and climb out of well...

### Help!

Have you got a problem in an adventure that no-one you know can solve? If so then write to The Balrog at the usual address and your plea

for aid will be printed. Please only send in requests if you are desperate - use a Lord or Lady of Adventure if at all possible!

- Alistair Crook is stuck in Heavy on the Magick - what is the password for the eye of Heaven?

- Stephen Wilson needs help in Panic beneath the Sea and City for Ransom. In the former he wants to know the PIN number for the cash card and in City he wants to know how to open the clothes chest.

- Chris "The Barbarian" Gore is needy of advice in the Lord of the Rings - "In Part 1 I have Strider in my party and I keep following him around from Bree. I have found the message from Gandalf telling me to get an elfstone. I also got a message from Radagast the Brown via a bird. I pass Bree again only to get killed by the Dark Riders. Please help!"

- 'The Kenderian' needs help in The Price of Magick. He (she?) wants to know where the fieldspar lens and blue box are and how to get the wheel. (Use the bat - Balg.)

## Lords & Ladies of Adventure

• Four new Lords of Adventure join us this month, including Mark Eltringham with a very impressive list of solved games.

As usual, treat the Lords and Ladies with the care and respect they deserve - ALWAYS keep phoning within reasonable hours (or those stated) and ALWAYS send a stamped SAE when writing - otherwise you won't get a reply! These people are giving away their time for nothing, so be considerate!

Adventure Quest • Angelique • Apache Gold •

Arnold Blackwood Trilogy • Beer Hunter • Bestiary • Big Sleaze • Black Fountain • Black Knight • Boggit • Boredom • Bored of the Rings • Brown Free • Can I Cheat Death (I & II) • Case of the Mixed-Up Shymer • Cave Capers • City for Ransom • Classic

Adventure • Colossal Adventure • Colour of Magic • Crash Landing • Cricket Crazy • Dodgy Geezers •

Doomlords • Dracula • Dungeon Adventure • DAA •

Emerald Isle • Escape Alien Spaceship • Escape

from Koshima • Espionage Island • Fantasia

Diamond • Firestone • Football Frenzy •

Frankenstein • Galaxies • Gems of Stradus •

Ghosthouse • Grange Hill • Heavy on the Magick •

Hobbit • Hunchback • Imagination • Ingrid's Back •

Ichor • Island of Chaos • Jason of the Argonauts •

Journey to Death • Kentilla • Knightmare • Knight

Orc • Knight Tyne • Kobyashi Naru • Labyrinth •

Lancelot • Life Term • Lords of Magic • Lord of the

Rings • Lords of Time • Lost Shadow • Magicians

Apprentice • Microman • Mindfighter • Mindshadow

• Mordon's Quest • Mountains of Ket • Mural,

Mystery of Indus Valley • Necris Dome • Never

Ending Story • Not a Penny More Not a Penny Less

Deadenders • Gnome Ranger • Hitchhiker's Guide • Lancelot • Quest for the Golden Eggcup • Rigell's Revenge • Smashed • Venom

Richard Jamieson, 79 Land Street, Rothes, Aberlour, Banffshire AB38 7BB.

Adventure Quest • Angelique • Arnold Blackwood Trilogy • Big Sleaze • Black Fountain • Bugsy • Case of the Mixed-Up Shymer • Castle Blackstar • Castle of the Skull Lord • Crystal Theft • Cursed Be the City • Cutthroats • Dracula • Dungeon Adventure • DAA • Enchanter • Escape from Koshima • Espionage Island • Fantasia Diamond • Football Frenzy • Frankenstein • Gnome Ranger • Gremlins • Guild of Thieves • Haunted House • Hermitage • Hitchhiker's Guide • Hollow Graphic • Hollow Text • Hollywood Hijinx • Hunchback • Imagination • Inca Curse • Infidel • Ingrid's Back • Jack the Ripper • Jinxter • Kingdom of Hamil • Kobyashi Naru • LanceLOT • Leather Goddesses • Lifeterm • Lords of Time • Lurking Horror • Mansion • Mindshadow • Monsters of Murdac • Mordon's Quest • Mountains of Ket • Mystery of Indus Valley • Myth • Necris Dome • Never Ending Story • Nova • Nythyl • Pawn • Planet of Death • Planetfall • Questprobe • Rebel Planet • Rigell's Revenge • Robin of Sherwood • Robocide • Seabase Delta • Shard of Inovar • Sharpe's Deeds • Ship of Doom • Smashed • Sorceror • Souls of Darkon • Spellbreaker • Spytrek • Star Wreck • Subsunk • Theseus • Top Secret • Venom • Very Big Cave Adventure • Winter Wonderland • Wishbringer • Wolfman and Zork I • II & III • all Interceptor games!

Mark Eltringham, 39 Gargle Hill, Thorpe St Andrew, Norwich, Norfolk NR7 0XX.

Adventure Quest • Angelique • Apache Gold •

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Big Sleaze • Black Fountain • Black Knight • Boggit •

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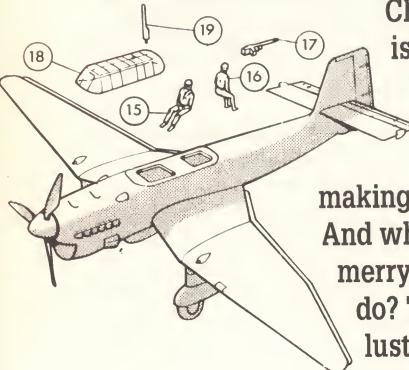
Journey to Death • Kentilla • Knightmare • Knight

Orc • Knight Tyne • Kobyashi Naru • Labyrinth •

Graham Wheeler, 2 Burford Close, Southdown, Bath, Avon BA2 1JF. Tel between 10am and midnight (0225) 426919

# Type-ins

JAMES LEACH sorts through another mailbag full of ripper routines



Christmas is a time for festivities, and for making merry. And what do merry people do? They sing lustily. The fact that they

do this at 3am in the road outside my house, to the accompaniment of breaking glass and swearing doesn't seem to spoil their enjoyment. It certainly spoils mine.

## ALTO

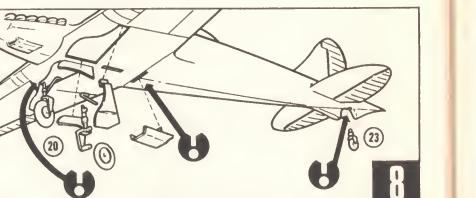
Anyway, this musical type-in comes courtesy of Val Robinson of Fulham in London. We wouldn't dare to guess which sex Val is (we've learnt our lesson), but he/she has produced a piano-style keyboard which indicates the notes as you play them. It's very simple and great fun. You just use the second and third rows of computer keys to simulate the notes. f0 to f8 are programmed to go higher up the scale.

Try playing the following Christmassy tune. It's 'Ding-Dong Merrily On High':

: : ; lkj jk::l::

```

(LqAi)100
(NpAt)200.'ALTO-by-Val-Robinson'
(EiA)30.MODE.0:BORDER.0:RESTORE
(JsAq)40.FOR:p=2:TO.15
(KuAl)500.INK.p,13
(MIAk)60.NEXT.p
(LrAw)700.INK.1,13:INK.0,1:GRAPHICS.PEN.0
(EnBn)800.'Draw-piano-keys-on-lower-half-of-screen.
(PqBp)900.WINDOW#3,1,28,14,25:PAPER#3,1:Pen#3,0:CLS
    .#3
(DmAu)100.FOR:x=160:TO.576:STEP.32
(NuAq)110.PLOT.x,60:DRAWR.0,.95
(CsAm)120.NEXT.x
(DxAt)130.PLOT.160,60:DRAWR.416,0
(AqAs)140.PLOT.158,156:DRMR.436,0
(KvAv)150.FOR:x=150:TO.566:STEP.32
(ATBr)160.IF:x>214.OR:x>310.OR:x=438.OR:x=534.THEN.GOTO.180
(DwCj)170.PLOT.x,156:DRAWR.0,-
    64:DRAWR.20,0:DRAWR.0,64:MOVER.-12,-2:Fill.0
(JoA1)180.NEXT.x
(LqAo)190.MOVE.165,75
(EuAp)200.FOR:n=3:TO.15
(PmA1)210.FILL.n
(HxAp)220.MOVER.32,0
  
```



## 360 DEGREES

This little scorcher is from Simon Clarke of Princes Risborough in Buckinghamshire. Simply change the contents of text\$ in line one to put in whatever message you choose. Hours (well, seconds) of fun can be had. The clever part is how the phrase is expanded or contracted to fit exactly into the circle.

```

(M1Cq)180.MODE.1:mo=16:INK.0,0:INK.1,26:INK.2,6:INK.3,
    24:BORDER.0:text$=360..DEGREES.BY.S.CLARK"
(ErBi)180.IF:p(k)=2.THEN:INK.(k),6
(HoBp)190.IF:p(k)=1.AND.NOT.k=1.THEN:INK.p(k-1),18
(LvAp)200.IF:p(k)=2.THEN:INK.2,18
(CxAp)210.IF:k>26.OR:k<24.THEN:INK.p(k),6
(KrAr)220.WHILE:INKEY(n(k))=0
  
```

```

(X1As)50.FOR:nu=0:TO.length-1
(KkBj)60.FOR:i=0:TO.mo-1:FOR:o=0:TO.mo-1
(Jobi)70.IF:TEST((num#o)+i,o)>0.THEN.90
(DtAq)80.NEXT.o,i,nu:END
(FtBm)90.de=(num#steps)-sti*i-180:th=thi*o:DEC
(CwBs)100.PLOT.x+(le+th)*COS(de),y+(he+th)*SIN(de),co
    1:GOTO.80
  
```

```

(ydian.Mode"
(CmCi)360.PRINT.TAB(15)"9...Diminished.7th";TAB(40)"2
    0..Mixolydian"
(GuCj)370.PRINT.TAB(14)"10...Dominant.9th";TAB(40)"21
    ..Lorian.Mode"
(EtCk)380.PRINT.TAB(14)"11...Diminished.9th";TAB(40)"22
    ..Whole.Tone"
(CrAp)390.LOCATE.14,22
(CwBj)400.INPUT"Select.between.1.and.22:";x
(JbBj)410.IF:x<1.OR:x>22.THEN:CLS:GOTO.220...
(ChMk)420.CLS
(KsBx)430.IF:x>11.THEN:PRINT"1.R.A.N.S.P.O.S.I.T.I.O
    .N..O.F...S.C.A.L.E.S"...
(KwBj)440.IF:x>11.THEN:PRINT.STRING$(45,"-")...
(QgBj)450.IF:x<12.THEN:PRINT"1..H.O.R.D.S"...
(CuBm)460.IF:x>12.THEN:PRINT.STRING$(16,"-")...
(Kiaj)470.PRINT
(OoCk)480.PRINT"Insert:key.signature.followed.by,'s'
    for:sharp.and,'f'for:flat."
(DnBp)490.PRINT:PRINT
(KuBp)500.IF:x>1.THEN:PRINT"Major
    .....1
    .....3.....5"...
(BkAk)520.IF:x>3.THEN:PRINT"Augmented.+(+).1
    .....3.....5"...
(DxBv)530.IF:x>4.THEN:PRINT"Major.6th
    .....(6).1
    .....3.....5.....6"...
(CmCj)540.IF:x>5.THEN:PRINT"Minor.(m).1
    .....3.....5.....6"...
(CiBj)550.IF:x>6.THEN:PRINT"Dominant.7th.(7).1
    .....3.....5.....7"...
(DmBj)560.IF:x>7.THEN:PRINT"Major.7th.(m7).1
    .....3.....5.....7"...
(TuBj)570.IF:x>8.THEN:PRINT"Minor.7th.(m7).1
    .....3.....5.....7"...
(PmBx)580.IF:x>9.THEN:PRINT"Diminished.7th.1
    .....3.....5.....7"...
(dim)"
(JpBx)590.IF:x>10.THEN:PRINT"Dominant.9th.1
    .....3.....5.....7"...
(EiBj)600.IF:x>11.THEN:PRINT"Major.9th.1
    .....3.....5.....7"...
(DiBj)610.IF:x>12.THEN:PRINT"Major.Scale.1
    .....2.....3.....4.....5.....6.....7.....8"...
(LqCj)620.IF:x>13.THEN:PRINT"Natural.Minor.1
    .....2.....3.....4.....5.....6.....7.....8"...
(BiCj)630.IF:x>14.THEN:PRINT"Harmonic.Minor.1
    .....2.....3.....4.....5.....6.....7.....8"...
(CwCj)640.IF:x>15.THEN:PRINT"Melodic.Minor.1
    .....2.....3.....4.....5.....6.....7.....8"...
(HwCj)650.IF:x>16.THEN:PRINT"Hungarian.Mode.1
    .....2.....3.....4.....5.....6.....7.....8"...
(DxCj)660.IF:x>17.THEN:PRINT"Dorian.Mode.1
    .....2.....3.....4.....5.....6.....7.....8"...
(HxCj)670.IF:x>18.THEN:PRINT"Phrygian.Mode.1
    .....2.....3.....4.....5.....6.....7.....8"...
(JvCj)680.IF:x>19.THEN:PRINT"Lydian.Mode.1
    .....2.....3.....4.....5.....6.....7.....8"...
(CkCj)690.IF:x>20.THEN:PRINT"Mixolydian.Mode.1
    .....2.....3.....4.....5.....6.....7.....8"...
(JiA1)700.IF:x>21.THEN:PRINT"Locrian.Mode.1
    .....2.....3.....4.....5.....6.....7.....8"...
(DmBw)710.IF:x>22.THEN:PRINT"WholeTone.Mode.1
    .....2.....3.....4.....5.....6.....7.....8"...
(CoAt)720.WINDOW#2,1,80,9,24...
(NxCn)730.m$="C.CMD.DHE.F.FBG.GHA.AHB.C.CHD.DHE.F.FBG
    .GHA.AHB.C.CHD.DHE"...
(MsBx)740.m$="C.DBD.EHE.F.GBG.AB.A.BbB.C.DBD.EHE.F.GBG
    .ABA.BB.B.C.DBD.EHE"...
(EsCj)750.LOCATE#2,1,1:LINE.INPUT#2,"Basic.key":bs$:
    LOCATE#2,1,1:PRINT#2,SPACE$(20)...
(GoCi)760.IF:bs$=UPPER$(bs$)
(GoCi)770.IF:bs$="S".THEN:GOTO.750...
(BsBx)780.IF:INSTR("AFASBFCSDFDSEFSGFGS",bs$)=0.THEN
    GOTO.750...
  
```

## MUSICAL CHORDS AND SCALES

Continuing the musical theme, this offering from David Webber of the Isle Of Man, is a serious application. It will identify the notes in many chords and scales. As well as major, minor and augmented, it will handle a great many other chords and sequences. One for the REAL musicians around.

```

(XiAw)10.REM.MUSICAL.CHORDS.AND.SCALES
(FmAw)20.REM
(CiA)30:
(PsA)40.CLS
(FlA)50.MODE.2
(OkBj)60.LOCATE.20,1
(MnBn)70.PRINT"TABLES.OF.MUSICAL.CHORDS.AND.SCALES"
(CmAw)80.PRINT.TAB(20)STRING$(38,"-")...
(OkBp)90.PRINT.TAB(21)"Copyright.-
    .David.T.Webber.1990"...
(OtAu)100.PRINT:PRINT:PRINT:PRINT
(CuCj)110.PRINT.TAB(8)"This.program.enables.the.music
    ian.to.check.out.any.of.11"
(CwAm)120.PRINT
(KoCn)130.PRINT.TAB(8)"chords.for.use.with.an.organ.-
    piano.or.stringed.instrument."
(FkA)140.PRINT
(CAvCj)150.PRINT.TAB(8)"In.addition.he.is.able.to.tran
    spose.notes.between.any.two"
(HoA)160.PRINT
(NvBj)170.PRINT.TAB(8)"keys.and.relate.them.-
    to.any.of.11.scales."
(HwAv)180.PRINT:PRINT:PRINT:PRINT
(CkBp)190.PRINT.TAB(8)"Press.any.key.to.continue"...
(DwAx)200.a$=INKEY$:IF:a$="" THEN.200
(StA)210.CLS
(BsCj)220.PRINT.TAB(10)"T.A.B.L.E..0.F..C.H.O.R.D.S
    ...A.N.D..S.C.A.L.E.S"...
(CmAw)230.PRINT.TAB(10)STRING$(50,"-")...
(GjA)240.PRINT:PRINT
(GiBj)250.PRINT.TAB(15)"Chords";TAB(40)"Scales"...
(GkBj)260.PRINT.TAB(15)"-----";TAB(40)"-----"
    ...
(JiA1)270.PRINT
(AvBp)280.PRINT.TAB(15)"1..Major";TAB(40)"12..Major
    "...
(GnBj)290.PRINT.TAB(15)"2..Minor";TAB(40)"13..Natur
    al.Minor"...
(KxBj)300.PRINT.TAB(15)"3..Augmented";TAB(40)"14..H
    armonic.Minor"
(BmBj)310.PRINT.TAB(15)"4..Major.6th";TAB(40)"15..M
    elodic.Minor"
(JpCj)320.PRINT.TAB(15)"5..Minor.6th";TAB(40)"16..H
    ungarian.Minor"
(IjBj)330.PRINT.TAB(15)"6..Dominant.7th";TAB(40)"17.
    .Dorian.Mode"
(FnBj)340.PRINT.TAB(15)"7..Major.7th";TAB(40)"18..P
    hrygian.Mode"
(GoCi)350.PRINT.TAB(15)"8..Minor.7th";TAB(40)"19..L
    ydian.Mode"
  
```



## TYPE-INS



```

(PnRu)790.PRINT#2,"Basic.key:....";
(HvBj)800.COSUB.1080:GOSUB.890:GOTO.810
(CtBj)810.PRINT#2:PRINT#2
(KiAv)820.IF:x<12.THEN:GOTO.980
(BmCj)830.LOCATE#2,1,4:LINE.INPUT#2,"Transposed.key:-
    ";bs$:LOCATE#2,1,4:PRINT#2,SPACE$(20)...
(L1As)840.bs$:UPPER$(bs$)...
(D1Ax)850.IF:bs$="S".THEN:GOTO.830
(NnBv)860.IF:INSTR("AFASBFCSDFDSEFSGFGS",bs$)=0.THEN
    GOTO.830
  
```

```

(AiAv)870.PRINT#2,"Transposed.key:....";
(FvBj)880.COSUB.1080:GOSUB.890:GOTO.980
(EkCk)890.IF:bs$="C".OR.bs$="F".OR.NID$(bs$,2,1)="F".
    THEN:GOTO.940.ELSE.900
(DvAv)900.FOR:d=z:T0.z+28:STEP.2...
(CwAu)910.PRINT#2,MID$(n$,d,2)..."...
(KsBj)920.NEXT
(EmMj)930.GOTO.970
(OnBj)940.FOR:d=z:T0.z+28:STEP.2...
(CkAk)960.NEXT
(CpBn)970.RETURN
(GnAt)980.PRINT#2:PRINT#2:PRINT#2
(FtBx)990.PRINT#2,"Do.you.want.another.key.signature.
    "...
  
```

```

(DrAm)1000.PRINT#2
(JsCj)1010.PRINT#2,"Do.you.want.another.Chord.or.Scal
    e..Press.2"...
(FtAn)1020.PRINT#2
(HjBj)1030.LOCATE#2,1,12:INPUT#2,"Input:";p:LOCATE#2
    ,1,12:PRINT#2,SPACE$(20)...
  
```

```

(PrBj)1040.IF:p=1.THEN:CLS#2:GOTO.730...
(DnBj)1050.IF:p>2.THEN:CLS:GOTO.220...
(JxBj)1060.IF:p<1.OR:p>2.THEN:GOTO.1030...
(ikAk)1070:
(KxHu)1080.IF:bs$="C".THEN:z=1...
(IvBj)1090.IF:bs$="GS".OR:bs$="DP".THEN:z=3...
(EiBj)1100.IF:bs$="DS".OR:bs$="EF".THEN:z=7...
(OvBj)1110.IF:bs$="F".THEN:z=9...
(FqBx)1120.IF:bs$="F".THEN:z=11...
(FiBj)1140.IF:bs$="FS".OR:bs$="GP".THEN:z=13...
(IrBj)1150.IF:bs$="G".THEN:z=5...
(KkBj)1160.IF:bs$="GS".OR:bs$="AF".THEN:z=17...
(GrwBj)1170.IF:bs$="#A".THEN:z=19...
(EvBj)1180.IF:bs$="AS".OR:bs$="BF".THEN:z=21...
(LiBj)1190.IF:bs$="B".THEN:z=23...
(BmBj)1200.IF:bs$="BS".OR:bs$="CF".THEN:z=25...
(PkAn)1210.RETURN
  
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{IrAx}170-LOCATE-6,8;PRINT-.PRESS-.
{NwAs}180-LOCATE-6,9;PRINT-.....".
{MqAv}190-LOCATE-6,10;PRINT-"ANY-KEY"
{OpAt}200-LOCATE-6,11;PRINT-.....".
{DxBk}210-LOCATE-6,12;PRINT-"TO-START".
{JtAm}220-PAPER-1
{AuAm}230-GOSUB-940
{FoAm}240-GOSUB-1570
{IlAp}250-WHILE-NOT-Full%
{HnAm}260-GOSUB-1000...
{EnAp}270-CLEAR-INPUT
{DwAs}280-Blocked%-=Full%
{PsAr}290-WHILE-NOT-Blocked%
{BsAu}300-w%-=MaxWait%i%-=INKEY%
{DsAu}310-WHILE-w%>0-AND-i%=
{PqAu}320-w%<w%-1;i%-=INKEY%
{EqAk}330-WEND
{HiAv}340-x%<=xx%y1%<=yx%r1%<=r%
{NiBj}350-IF-i%$-CHR$(242)-THEN-GOSUB-600
{BpBj}360-IF-i%$-CHR$(243)-THEN-GOSUB-670
{MyBj}370-IF-i%$-CHR$(241)-THEN-GOSUB-740
{IlAv}380-IF-i%="."-THEN-GOSUB-820
{EuAw}390-IF-i%=""-THEN-GOSUB-880
{KsAu}400-IF-i%="9"-THEN-GOSUB-940
{Ctao}410-yg%<=yg%1
{LpDq}420-FOR-n%<=0-TO-3:Blocked%-=Blocked%OR-(Boa
    rd%((x1%+Shape%(1,n%,r1%)/2,yg%+Shape%(2,n%,r1%)/
    80))>0):NEXT-n%
{DwAx}430-IF-NOT-Blocked%THEN-yg%<=yg%
{McCn}440-CALL-&602,0Shape%(0,0,r%),r%,xx%,yx%,r1%,bx%
    ,0Shape%(0,0,r1%),x1%,y1%
{IvAw}450-xx%<=x1%:yx%<=y1%:r1%<=r1%
{HtAk}460-WEND
{OuAn}470-GOSUB-1160
{OIBj}480-IF-Rows%<0-THEN-GOSUB-1290
{OsAk}490-WEND
{ApAm}500-PAPER-0
{KiAv}510-LOCATE-6,10;PRINT-..GAME-."
{CoAv}520-LOCATE-6,11;PRINT-.....".
{JwAx}530-LOCATE-6,12;PRINT-..OVER-."
{HrBj}540-FOR-Pause%=-1-TO-3000:NEXT-Pause%
{HuAu}550-WEND
{DoAl}560-END
{AoAj}570-'
{LsAv}580-'.Check-shape-can-move-left
{LkAi}590-'
{Aibj}600-xx%<=x1%<=yg%<=y1%<1:CanMove%<=True%
{HkDv}610-FOR-n%<=0-TO-3:CanMove%<=CanMove%AND-(Bo
    ard%((xx%+Shape%(1,n%,r1%)/2,yg%+Shape%(2,n%,r1%)
    /80))>0):NEXT-n%
{JmBj}620-IF-CanMove%THEN-x1%<=xx%
{HiAm}630-RETURN
{PrAi}640-'
{MwAv}650-'.Check-shape-can-move-right
{ApAj}660-'
{EnBp}670-xx%<=x1%<=yg%<=y1%<1:CanMove%<=True%
{Cldv}680-FOR-n%<=0-TO-3:CanMove%<=CanMove%AND-(Bo
    ard%((xx%+Shape%(1,n%,r1%)/2,yg%+Shape%(2,n%,r1%)
    /80))>0):NEXT-n%
{EnBi}690-IF-CanMove%THEN-x1%<=xx%
{ExAo}700-RETURN...
{MoAj}710-'
{OmAu}720-'.Check-shape-can-rotate
{DoAj}730-'
{GjBj}740-rr%<=(r1%+1)-MOD-4:yy%<=y1%+1
{G1Bm}750-CanRotate%<=x1%<7-AND-x1%<=0-AND-y1%<16
{EmEl}760-IF-CanRotate%THEN-FOR-n%<=0-TO-3:CanRotate%
    e%<=CanRotate%AND-(Board%((x1%+Shape%(1,n%,rr%)
    /2,yy%+Shape%(2,n%,rr%)/80))>0):NEXT-n%
{AsBk}770-IF-CanRotate%THEN-r1%<=rr%
{MxAn}780-RETURN...
{IoAj}790-'
{Ctha}800-'.Drop-shape
{CqAk}810-'
{OoBu}820-CALL-&6171,&Board%((0,0),@Shape%(0,0,r1%),x1
    ,y1%,y1%
{HwBj}830-CALL-&6000,0,0Shape%(0,0,r%),x1,y1%
{OwAn}840-RETURN
{MuAj}850-'
{OtAr}860-'.Reveal-next-shape

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{JwAi}870-'
{BgBo}880>ShowNextShape%<=NOT>ShowNextShape%
{OxEj}890-IF>ShowNextShape%THEN-CALL-&6000,nextbx,ON
    extShape%(0,0,nextbx),11,6-ELSE-CALL-&6000,0,0Ne
    xtShape%(0,0,nextbx),11,6
{HjAm}900-RETURN
{IsAi}910-'
{LuAm}920-'.Pause-game
{LwAj}930-'
{EmAp}940-i%-=INKEY%
{FwBj}950-WHILE-i%="":i%-=INKEY%:WEND
{AvAm}960-RETURN
{CoAj}970-'
{KrAg}980-'.Get-next-shape
{FsAj}990-'
{CwBj}1000-FOR-n1%<=0-TO-2:FOR-n2%<=0-TO-3
{FnAr}1010-FOR-n3%<=0-TO-3
{MpBw}1020-Shape%(n1%,n2%,n3%)<=NextShape%(n1%,n2%,n
    3%)
{MkAg}1030-NEXT-n2%,n1%
{LjBj}1040-r%<=nextbx
{AkAp}1050-b%<=nextbx
{EqBk}1070-INK-1,Inks%(0,i%):INK-3,Inks%(1,i%)
{IjAt}1080-MaxWait%-=INT(RND*6)*5
{FpAo}1090-GOSUB-1460
{NpDq}1080-IF>ShowNextShape%THEN-CALL-&6000,0,0Shape
    %((0,0,r%),11,6:CALL-&6000,nextbx,@NextShape%((0,0
    ,nextbx),11,6
{AxAr}1090-x%<=3:y%<=0
{BoDo}1100-FOR-n%<=0-TO-3:Full%<=Full%OR-(Board%((x
    +Shape%(1,n%,r%)/2),y%+Shape%(2,n%,r%)/80))>0)
    :NEXT-n%
{JoBj}1110-CALL-&6000,b%,0Shape%(0,0,r%),xx%,y%
{PjAn}1120-RETURN
{BIAk}1130-'
{DsBj}1140-'.Check-for-any-complete-rows
{FrAj}1150-'
{MuCr}1160-FOR-n%<=0-TO-3:Board%((x1%+Shape%(1,n%,r%
    /2,y%+Shape%(2,n%,r%)/80))<=b%:NEXT-n%
{CkAt}1170-Score%<=Score%5
{DkBj}1180-LOCATE-28,8;PRINT-Using-#####;Rows%
{NkAr}1190-CurrentRow%<=18
{HxAu}1200-FOR-AllRow%<=1-TO-18
{ElAv}1210-CompleteRow%<=Rows%>0
{ImDj}1220-FOR-Column%<=1-TO-8:CompleteRow%<=Comple
    teRow%AND-(Board%((Column%,CurrentRow%))>0):NEXT
    -Column%
{EjCj}1230-IF-CompleteRow%THEN-GOSUB-1780-ELSE-Curre
    ntRow%<=CurrentRow%-1
{JxAp}1240-NEXT-AllRow%
{MoAo}1250-RETURN
{HsAk}1260-'
{IiBj}1270-'.Calculate-bonus-at-end-of-level
{OmAj}1280-'
{FtBj}1290-CurrentRow%<=0:Bonus%<=True%
{Picr}1300-FOR-Column%<=1-TO-8:Bonus%<=Bonus%AND-(Bo
    ard%((Column%,CurrentRow%))>0):NEXT-Column%
{NqAo}1310-WHILE-Bonus%
{IsBk}1320-LOCATE-6,CurrentRow%+3;PRINT-....."
{HoAt}1330-Score%<=Score%50
{GuAv}1340-CurrentRow%<=CurrentRow%+1
{KjBj}1350-LOCATE-28,8;PRINT-Using-#####;Score%
{JwCr}1360-FOR-Column%<=1-TO-8:Bonus%<=Bonus%AND-(Bo
    ard%((Column%,CurrentRow%))>0):NEXT-Column%
{IjAl}1370-WEND
{NmAv}1380-LOCATE-6,10;PRINT-LEVEL-".
{EiBm}1390-LOCATE-6,12;PRINT-".COMPLETE"
{OoAv}1400-FOR-Pause%=-1-TO-1000:NEXT-Pause%
{IsAo}1410-GOSUB-1570
{BlAn}1420-RETURN
{OtaI}1430-'
{JrAj}1440-'.Select-a-random-next-shape
{JwAj}1450-'
{DuQj}1460-s%<=INT(RND*7)
{OwBp}1470-FOR-n1%<=0-TO-2:FOR-n2%<=0-TO-3
{KkBq}1480-FOR-n3%<=0-TO-3
{PtcBj}1490-NextShape%((n1%,n2%,n3%))<=ShapeArray%((n1%
    ,n2%,n3%,5))
{OrAp}1500-NEXT-n3%,n2%,n1%
{FvAr}1510-nextbx%<=INT(RND*4)
{OrAs}1520-nextbx%<=INT(RND*5)+2

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{DwAn}1530-RETURN
{JwAj}1540-'
{NqAt}1550-'.Set-up-next-level
{HmAj}1560-'
{HvBx}1570-Level%<=Level%+1:LOCATE-28,10;PRINT-Using
    -#####;Level1X
{MjAt}1580-MaxRows%<=MaxRows%+1
{PoQj}1590-Rows%<=MaxRows%
{LjBj}1600-LOCATE-28,12;PRINT-Using-#####;Rows%
{PjBj}1610-LOCATE-28,8;PRINT-Using-#####;Score%
{OiaI}1620-FOR-AllRows%<=0-TO-18
{DuAu}1630-FOR-AllColumns%<=1-TO-8
{GuAv}1640-Board%((AllColumns%,AllRows%))<=0
{CoBp}1650-READ-NoOfBlocks%
{HuBt}1670-IF-NoOfBlocks%<-
    1-THEN-RESTORE-2980:READ-NoOfBlocks%
{JsAw}1680-FOR-n%<=1-TO-1:NoOfBlocks%
{FxBk}1690-READ-xs%,ys%:Board%((xs%,ys%))<=1
{LnBj}1700-NEXT-n%
{AsAg}1710-i%<=INT(RND*8)
{EqBk}1720-INK-1,Inks%(0,i%):INK-3,Inks%(1,i%)
{IwAv}1730-CALL-&600B,&Board%((1,0)
{FlAo}1740-RETURN
{OjAj}1750-'
{GgAu}1760-'.Remove-completed-row
{PxAj}1770-'
{LvBn}1780-CALL-&600B,&Board%((0,0),CurrentRow%
{OsBj}1790-Rows%<=Rows%-1
{NmBj}1800-LOCATE-28,12;PRINT-Using-#####;Rows%
{PpBj}1810-LOCATE-6,CurrentRow%+3;PRINT-....."
{DlAu}1820-Score%<=Score%+20
{JtBn}1830-CALL-&600B,&Board%((1,0)
{JuBj}1840-LOCATE-28,8;PRINT-Using-#####;Score%
{EwAo}1850-RETURN
{GwAk}1860-'
{BjAp}1870-'.Set-up-game
{LiAk}1880-'
{GpAm}1890-MODE-1
{EtBk}1900-INK-0,13:INK-1,26:INK-2,0:INK-3,19
{NkAr}1910-CurrentRow%<=18
{DlAu}1910-PAPER-2:PE1-1:BORDER-0:CLS
{HxAu}1920-FOR-AllRow%<=1-TO-18
{ElAv}1930-CompleteRow%<=Rows%>0
{ImDj}1940-FOR-Column%<=1-TO-8:CompleteRow%<=Comple
    teRow%AND-(Board%((Column%,CurrentRow%))>0):NEXT
    -Column%
{EjCj}1950-IF-CompleteRow%THEN-GOSUB-1780-ELSE-Curre
    ntRow%<=CurrentRow%-1
{JxAp}1960-NEXT-AllRow%
{MoAo}1970-1%<=&6621
{LkRn}1980-READ-d%
{OjAj}1970-FOR-n%<=1-TO-LEN(d$)-STEP-2
{DpBj}1980-POKE-1%,VAL("&"+MID$(d$,n%,2))
{MhAo}1980-1%<=1%+1
{KpAm}1970-NEXT-n%
{LsBj}1980-WEND
{CtBj}1990-WHILE-1%<=&6621
{LkRn}1990-READ-d%
{OjAj}1990-'.Set-up-game
{LiAk}1990-'
{GpAm}1990-MODE-1
{EtBk}2000-INK-0,13:INK-1,26:INK-2,0:INK-3,19
{DlAu}2010-LOCATE-6,CurrentRow%+3;PRINT-....."
{HxAu}2020-MEMORY-&SFFF%
{JtBn}2030-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{OjAj}2040-'.Data-for-n/c-subroutines
{CnBn}2050-READ-d$
{BsaX}2060-FOR-n%<=1-TO-1-LEN(d$)-STEP-2
{EvBj}2050-POKE-1%,VAL("&"+MID$(d$,n%,2))
{MhAo}2050-1%<=1%+1
{KpAm}2070-NEXT-n%
{LsBj}2080-READ-d%
{CnBn}2090-LOCATE-16,8;PRINT-Next%
{OjAj}2100-'.Ink-data
{FlAk}2110-'
{CnBn}2120-LOCATE-6,22,8,24,15,17,14,19,7,21,26,14,12,2
{IjBj}2130-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{DkBj}2140-RESTORE-3160
{JtBn}2150-1%<=&6600
{LqBj}2150-WHILE-1%<=&6233
{AwAo}2150-READ-d%
{CnBn}2160-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{BjAp}2170-'
{CnBn}2180-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2190-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{DkBj}2200-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2210-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2220-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2230-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{DkBj}2240-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2250-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2260-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2270-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{DkBj}2280-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2290-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2300-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2310-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{DkBj}2320-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2330-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2340-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2350-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2360-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2370-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2380-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2390-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2400-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2410-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2420-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2430-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2440-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2450-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{BjAp}2460-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2470-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{CnBn}2480-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{BjAp}2490-LOCATE-16,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2500-RESTORE-3160
{JtBn}2510-1%<=&6600
{LqBj}2520-WHILE-1%<=&6233
{AwAo}2530-READ-d%
{CnBn}2540-FOR-n%<=1-TO-1-LEN(d$)-STEP-2
{EvBj}2550-POKE-1%,VAL("&"+MID$(d$,n%,2))
{MhAo}2560-1%<=1%+1
{KpAm}2570-NEXT-n%
{LsBj}2580-WEND
{CpAp}2590-RESTORE-3120
{OnBp}2600-FOR-ix%<=0-TO-7
{EvBj}2610-READ-10%,11%:Inks%(0,i%)<=i%:Inks%(1,i%)
{DkBj}2620-IF-ShapeArray%((2,n3%,n2%,n1%))<=n%
{CnBn}2630-ShowNextShape%<=False%
{OxAb}2640-GOSUB-1460-'
{CjBj}2650-CLS:INK-0,0:INK-1,0:INK-3,0:PAPER-0
{IwBr}2660-FOR-n%<=9-TO-12:LOCATE-16,n%;PRINT-"
    :NEXT-n%
{QuAj}2670-PAPER-1:PE1-3
{IwBr}2680-LOCATE-16,8;PRINT-"
    :NEXT-n%
{FrBj}2690-LOCATE-16,15;PRINT-".KEYS-"
{OxAb}2700-LOCATE-16,16;PRINT-"
    :NEXT-n%
{CnBn}2710-LOCATE-16,17;PRINT-CHR$(242);":LEFT-"
    ..SP-":DROP-"
{FvBj}2720-LOCATE-16,18;PRINT-"
    :NEXT-n%
{FwBj}2730-LOCATE-16,19;PRINT-CHR$(243);":RIGHT-"
    ..7;RE-"
    ..VEAL-"
{OxAb}2740-LOCATE-16,20;PRINT-"
    :NEXT-n%
{CnBn}2750-LOCATE-16,21;PRINT-CHR$(241);":ROTATE-"
    ..9:PA-"
    ..USE-"
{BtBk}2760-LOCATE-21,8;PRINT-SCORE-"
    ..0-"
{IwAj}2770-LOCATE-21,9;PRINT-"
    :NEXT-n%
{DwBk}2780-LOCATE-21,10;PRINT-LEVEL-"
    ..1-"
{LwBj}2790-LOCATE-21,11;PRINT-"
    :NEXT-n%
{FrBk}2800-LOCATE-21,12;PRINT-ROWS-"
    ..5-"
{FobBj}2810-CALL-&6600,&COBC
{MvBj}2820-CALL-&600B,&Board%((1,0)
{Kibj}2830-INK-0,13:INK-1,6:INK-3,24:PAPER-0
{MoBj}2840-RETURN
{JwAj}2850-'
{EsAo}2860-'.Shape-data
{Fiaj}2870-'
{LqBj}2880-DATA-1,1,2,1,1,2,2,2
{MpBj}2890-DATA-0,1,1,1,2,1,3,1
{EtBj}2900-DATA-1,2,2,0,2,1,2,2
{FobBj}2910-CALL-&6600,&COBC
{MvBj}2920-CALL-&600B,&Board%((1,0)
{Kibj}2930-INK-0,13:INK-1,6:INK-3,24:PAPER-0
{MoBj}2940-RETURN
{JwAj}2950-'
{EsAo}2960-'.Shape-data
{Fiaj}2970-'
{LqBj}2980-DATA-1,1,2,1,1,2,2,2
{MpBj}2990-DATA-0,1,1,1,2,1,3,1
{EtBj}3000-DATA-1,2,2,0,2,1,2,2
{FobBj}3010-CALL-&6600,&COBC
{MvBj}30
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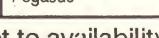
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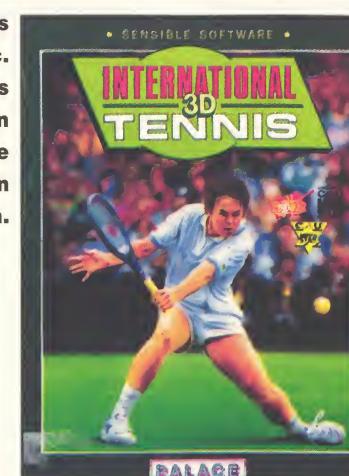
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Last year the Coders offered a brilliant portable CD player to one lucky winner, but this year, three of you - yes, three - will be getting a colour hand-held TV!

Shocked? We should think so! To find out more about these fabulous prizes, and how to enter, read on...

Isn't technology wonderful? With the advent of affordable portable colour tellys now anyone can lock themselves up in their bedrooms watching *Neighbours* (instead of doing their homework, filling in poll tax forms, or writing begging letters to the bank manager, which is what they told the others they were doing). And video recorders mean that you can record all those episodes you missed. (Co-incidentally, you may remember we gave away a portable telly and a video recorder last ish, ahem...)

Well now we are giving you the chance to catch up with your fave proggies on the bus, at the launderette, dangling from the Avon gorge - anywhere even your trusty portable wouldn't get to.

These hand-held TVs we're giving away are slim enough to fit in a coat pocket, yet their high-resolution colour LCD screens give absolutely startling picture quality. They run for hours on a single set of batteries, and their

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2. Which of the following has starred in *Neighbours*?
  - Kylie Minogue
  - Bonzo the Baboon
  - Cecil Parkinson

3. What does LCD stand for?
  - Long, Cool Drink
  - A variety of locomotive operating from Crewe
  - Liquid Crystal Display

4. Dizzy, the character in Codemasters' long-running series, is based on what item of food?
  - A loaf?
  - An egg?
  - A mutated marrow?

5. Every Christmas, "When a child is born" sung by Johnny Mathis makes you...

### THE RULES

- Employees of Future Publishing or Codemasters are not eligible for entry. Neither is anyone else who might be able to sneak into the offices and staple every entry but one to the inside of the hat.
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AA/JAN

# Cheat Mode

How does that man Phil Howard do it? Another huge wedge of tips...



Blimey, Crikey, Golly, Gosh, and other expletives you've come to expect from the AA team (they really talk like that!), it's the night before Christmas (c'mon use your imagination) and all through the house not a creature is stirring, not even a mouse. High above the rooftops, an old boy in red jets chimneyward clutching GX 4000 consoles for you, bottles of fizzy plonk for me. Snowflakes fall, and the earth shines crisp and white under

a pale winters moon. Somewhere in the cold distance, cheered by the ochre glow of a single candle lit lantern, and the yuletide spirit, carolers sing:

*"The boys of the NYPD choir were singing Galway Bay  
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```
(OnAs) 1.'-Spooky-Castle--tape-
(HvAg) 2.'-By-Graham-Smith
(EwAs) 3.'-Infinite-lives
(�tAj) 4.'
(LiaU) 10-DATA-06,00,11,52,5d,cd,77
(OiAv) 20-DATA-b,21,fc,00,22,d0,5d
(JkAv) 30-DATA-c3,71,5d,af,32,0a,09
(CnAs) 40-FOR-j=0 TO 20:READ-a$
(KpAs) 50-POKE-x=VAL("&+a$");y=y+
(LvAr) 60-POKE-j=235,x:NEXT-j
(TwAv) 70-IF-y=1975-THEN-CALL-235
(BjAq) 80-PRINT"data.error
```

- Multiface poke for Spooky Castle

Address = 090A  
Poke = 00

007™

## Live and Let Die

Licensed to cheat, Graham (0A7 - hackers' talk) Smith saves Queen and country from endless frustration with this tape poke for the game of the film of the book, Live and Let Die. James Bond, could you do this?

```
(HlAr) 1.'-Live-and-Let-Die
(HvAg) 2.'-By-Graham-Smith
(PtAr) 3.'-Infinite-fuel
(KxAs) 4.'-Tape---method-1
(HoAr) 5.'-Tape---method-1
(FwAq) 6.'-Tape---method-1
(FwAq) 7.'-Tape---method-1
(KsAt) 10-DATA-a,f,67,6c,22,01,74
(FxAv) 20-DATA-32,95,74,g3,fd,05
(IxAv) 30-DATA-21,fe,a3,22,57,a4
(MsAv) 40-FOR-i=0 TO 17:READ-a$
(CoAs) 40-FOR-i=0 TO 17:READ-a$
(KpAs) 50-POKE-x=VAL("&+a$");y=y+
(HvAs) 60-POKE-j=+2198c,x:NEXT-j
(CoAr) 70-IF-y<2040-GOTO-190
(GrBs) 80-MEMORY-3333:LOAD"
(LoAp) 90-CALL-41994
(OsAp) 100-PRINT"data.error
```

- Multiface pokes for Live and Let Die

Address Poke Effect
   
7495 00 Inf missiles
   
7401 00 Inf fuel
   
7402 00

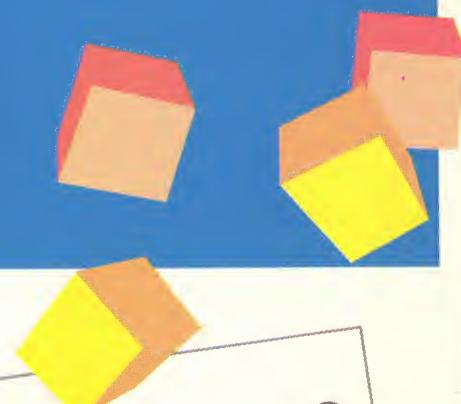


## Tetris

Long ago in a galaxy far away Bobby Wade (who?) complained that there was no pause facility for the Mirrorsoft game *Tetris*... Well, no sooner (?) said than done. Marcus Fletcher of Carlisle has produced a poke which gives you just that, a breather from the hectic pace of that game. It is specifically for the *Supreme Challenge* disk but may work on others. Press TAB to pause, any other key to restart.

```
(GvAl) 5.'-IDISC
(1shAr) 10-OPENOUT-"V":MEMORY-&FFF
(JkB1) 20-PRINT-"PUT-IN-GAME-DISC,
PRESS-A-KEY"
```

```
(J1Ap) 30-CALL-&BB18
(KmAr) 40-LOAD-"CONTROL",&1000
(BkAs) 50-LOAD-"AMSCODE.BIN",&3000
(CuAt) 60-LOAD-"GAMESCR.SCR",&5000
(PxAn) 70-CLOSEOUT
(MnAt) 75-POKE-&1B83,ASC(" ")
(IqBx) 80-FOR-I-&1B84 TO -&1B8B:READ-A$:POKE
-I,VAL("&+A$");NEXT
(EtAt) 90-DATA-CC,18,BB,0,0,0,0,0
(NvAn) 100-CALL-&1000
```



## Stunt Car Racer

*Stunt Car Racer* on disk by John Girvin of Belfast gets the treatment here, with infinite boost and invulnerability. I liked the Obi-Wan-Waring thingy in AA62 John, I may use it myself one day... when everyone has forgotten of course (where do you think I get my ideas from?).

```
(KsAt) 1.'STUNT-CAR-RACER-hacks
(ClAp) 2.'By-John-Girvin
(ClAo) 3.'August-1990
(�tAj) 4.'
(GmAv) 10-MODE-1:CALL-&BC02:Pen-1
(ObAp) 20-addr=&BE80:RESTORE
(ObAo) 30-READ-byte$
(ObB1) 40-IF-byte$="VARROOM".THEN-GOTO-70
(CxAs) 50-POKE-addr,VAL("&+byte$")
(TiAr) 60-addr=addr+1:GOTO-30
(ObBu)
70-PRINT-"Insert STUNT-CAR-RACER-disc-and-press-a-k
```



```
ey..."  
{LmAv} 80-CALL-&BB18:CALL-&BE80
{LjAs} 90-***.LEAVE-100-160-IN-***  
{LoBk} 100-DATA-b,be,cd,d4,bc,22,bi  
{LkAw} 110-DATA-be,79,32,b3,be,21,00,01
{CqAx} 120-DATA-0e,41,11,00,00,df,b1,be
{HvAx} 130-DATA-21,a7,be,22,0c,01,c3,00
{OsAw} 140-DATA-01,a4,48,4c,46,08,5a,21
{DtBi} 150-DATA-b4,be,22,7b,80,c3,09,00
{KpAp} 160-DATA-04,00,00,00
{JrAr} 170-'Infinite-Boost
```

```
(BpAs) 180-DATA-af,32,77,21
(NwAp) 190-'Invulnerability
(CvAt) 200-DATA-3e,c9,32,c3,98
(JxAs) 210-***.LEAVE-220-IN-***  
{JlAu} 220-DATA-c3,40,00,VARROOM,4a
```

- Multiface pokes (lets hope they are OK!) for Stunt Car disk

Address	Poke	Effect
2177	00	Inf. boost
98C3	C9	Invuln.



## Quattro Combat

Andy Price has been busy again, this time putting together a poke for Codemasters' *Quattro Combat* compilation. The cheat works on three of the four games on the tape - *Death Stalker*, *SAS Combat Simulator*, and *Arcade Flight Simulator*, so even though it's a bit long you get three for the price of one. You may be asking "So where's the *Ninja Massacre* cheat?", well, the inimitable Adam Waring can supply you with that, seeing as he wrote it (Not bad, Ad!). There are password entries to every 5th level - a lot better than a poke...!

```
5) RAIN 10) PINK 15) YEAR 20)
ROCK 25) WARD 30) HULL 35)
STAG 40) BEER
```

```
(CvAx) 1.'-Quattro-Combat-Cheat-System
(GwAr) 2.'-by-ANDY-PRICE
(JmAs) 3.'-use-Typewriter-codes*
```



```
(FtAj) 4.'  
(AnAr) 10-FOR-x=&BE00 TO -&BE21
(GtAt) 20-READ-p$:p=VAL("&+p$")
(KsAp) 30-POKE-x,p:NEXT
(OmAw) 40-MODE-1:PRINT"Choose-Game:"
```

```
50-PRINT"1.-Death-Stalker"
(OuAs)
```

```
(LiAt) 160-POKE-&BE24,&3C:GOTO-130
(OwAt) 170-POKE-&BE29,&3C:RETURN
(NiAt) 180-RESTORE-300:GOSUB-290
(ATAn) 190-RETURN
(MuAp) 200-RESTORE-420:GOSUB-290
(OnWu) 210-CLS:PRINT"Infinite-lives:"
(DmAr) 240-INPUT"Player-1":y$
(FwB1) 245-IF-LEFT$(y$,1)="y"-THEN-260
(HxRo) 250-POKE-&BE24,&3D
(BjAr) 260-INPUT"Player-2":y$
(OqDx) 265-IF-LEFT$(y$,1)="y"-THEN-280
(DwDp) 270-POKE-&BE29,&3D
(DkAm) 280-RETURN
(NqAr) 290-FOR-x=&BE23 TO -&BE2E
(B1B1) 300-READ-p$:POKE-x,VAL("&+p$")
(KoBn) 310-NEXT:RETURN
```

```
(MrAs) 320-DATA-ED,5B,38,BD,EB
(CrAr) 330-DATA-22,34,BE,11,37,BD
(PnAt) 340-DATA-EB,3E,C3,77,23,3E
(OvAu) 350-DATA-23,77,3E,BE,23,77
(BiB1) 360-DATA-21,40,00,E3,11,00
(ATAt) 370-DATA-BB,00,C3,4A,3A,91
(AuAt) 380-DATA-AF,32,AA,49,3E,FF
(ImAv) 390-DATA-32,86,32,8B,32
(CvAv) 400-DATA-3E,00,32,1C,17,3E
(IrAr) 410-DATA-00,32,BD,18,00,00
(PtAu) 420-DATA-0E,00,32,8A,89,3E
(FwAt) 430-DATA-00,32,4E,89,00,00
(NpAs) 440-DATA-00,41,50,00,CF,00
(GoAt) 500-FOR-x=&BE2F TO -&BE34
```

- Multiface pokes:

Address	Poke	Effect
---------	------	--------

<b>SAS Combat Simulator</b>	49AA	00
grenades	2386	FF
lives	328B	FF

- Multiface pokes:

<b>Death Stalker</b>	171C	00
ghosts	18BD	00
demons	N O	N O

<b>Arcade Flight Simulator</b>	9D12	00
lives (1)	9CD6	00
lives (2)		I n f

## Tau Ceti

Straight off the cover of AA61 is the free game *Tau Ceti*, pulled to pieces by Stephen Troup of Kings Lynn. Select which poke (or all of them) you want, and go out blasting. Brighten up your world with infinite flares.

```
(KjAo) 10-REM-Tau-Ceti
(JmAr) 20-REM-AA-Cover-Tape
(LiAl) 30-MODE-1
(ChAm) 40-BORDER-0
(EuBj)
50-INK-0,0,0:INK-1,11:INK-2,26:INK-3,24
(AqAm) 60-PAPER-0
(JsAm) 70-OPENOUT"D"
(HpAp) 80-MEMORY-1529
(GjAo) 90-CLOSEOUT
(PxDr) 100-WINDOW-4,36,21,24
(DvAm) 110-PEN-1
(ClAp) 120-LOAD"!TITLE"
(PqAn) 130-CALL-2000
(EsAo) 140-LOAD"!PART1"
(CpAn) 150-LOAD"!PART2"
(ChBn)
160-POKE-&4FF2,&A7:REM-Infinite-Flares
(CnBn)
170-POKE-&4FC0,&A7:REM-Infinite-Missiles
(EiB1)
180-POKE-&5025,&A7:REM-Infinite-Am's
(ikAm) 190-INK-1,20
(MxAo) 200-CALL-&888B
```

- Multiface pokes - see listing

Address	Poke	Effect
007™		
<b>SAS Combat Simulator</b>	49AA	00
grenades	2386	FF
lives	328B	FF
<b>Death Stalker</b>	171C	00
ghosts	18BD	00
demons	N O	N O
<b>Arcade Flight Simulator</b>	9D12	00
lives (1)	9CD6	00
lives (2)		I n f

## Hostages

Fresh from Casualty, Dr. Mike Wong is back again with a bit of surgery on the Infogrames disk game *Hostages*.

His diagnosis is that you ought to be able to play the second part of the game without having to mess about with the first, and his prescription for difficult games? Take Cheat Mode once a month!

```
(PoAt) 30·POKE·n,a:c=c+a:NEXT
(IiAt) 40·IF·c()>5518·THEN·210
(OmB) 50·PRINT·"Insert·Hostages...(!)"
(KjAu) 60·CALL·&BB18·CALL·&80
(HjAt) 70·DATA·21,00,01,e5,11,00
(FvAu) 80·DATA·00,0e,41,df,ce,00
(FnAt) 90·DATA·21,93,00,22,2f,01
(GkAs) 100·DATA·c9,cd,be,02,21,9f
(PpAs) 110·DATA·00,22,a7,10,c3,11
(CmAv) 120·DATA·01,21,ad,00,11,ac
(EnAv) 130·DATA·37,01,21,00,ed,b0
(LjAt) 140·DATA·c3,63,b3,21,83,05
(HqAu) 150·DATA·36,01,23,36,02,23
(PsAt) 160·DATA·36,03,3e,02,32,14
(LwAt) 170·DATA·05,3e,0b,32,5e,05
(KpAu) 180·DATA·3e,05,32,39,05,0e
(LrAt) 190·DATA·03,1e,00,c3,d4,37
(JnAr) 200·DATA·3c,c0,07,53,50
(BkAs) 210·PRINT·"Error..."
```

## OPERATION THUNDERBOLT

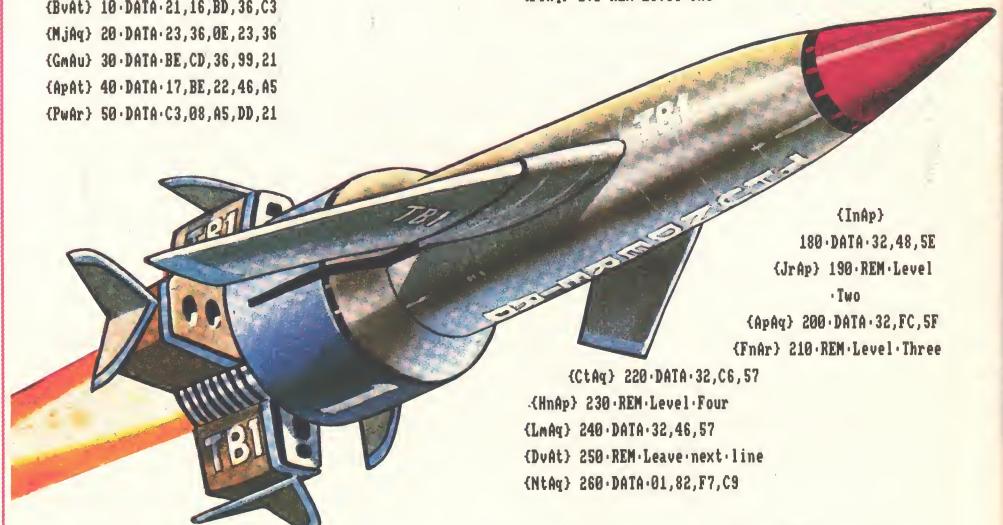
Look out, here come a bunch of tips on *Operation Thunderbolt* from Master games player and deceivers diarist Stephen Troup of Kings Lynn.

- Try to use as little ammo as possible, as it may cause your death if you run out.
- Only use rocket grenades when really necessary, or when there are too many enemy soldiers.
- To rescue the hostages on levels 4 and 6, shoot the door handles/locks. The door will open and the hostage appears to the right. When all 8 hostages have been released on each of the two levels, no more will appear, but all the doors will be closed.
- On three levels (ones where the hostages appear) there are end-of-level guardians.

The first (level 4) uses a machine gun, the second (level 6) uses a rocket launcher, and the final (level 8) uses a machine gun, but is also holding the pilot in front of him. The first two can be killed easily with the machine gun, or by using 3 rocket grenades. The last level is very difficult and must be shot precisely using your gun – the rocket will kill the pilot also. Only shoot the terrorist's head, as it is his most vulnerable part and easiest to hit. Shoot right to left (the sound will change when he is actually hit). Be very careful not to hit the pilot – you only get one chance.

At the start of level 8, hoard magazines and use up all your rocket grenades to avoid using them, and killing the pilot, later on. Only shoot the hand grenades, as, if you hit the hostages, precious energy, needed for the end of level will be lost.

```
(FvAp) 1·'·RASTAN·Hit·Squad
(MwAs) 2·'·by·Andy·Price
(PxAs) 3·'·More·lives·than
(CiAq) 4·'·you·can·use
(AoAs) 5·'·M2·poke:&D77,1ives
(FvAj) 6·'
(BvAt) 10·DATA·21,16,BD,36,C3
(MJq) 20·DATA·23,36,0E,23,36
(GmAu) 30·DATA·BE,CD,36,99,21
(APAt) 40·DATA·17,BE,22,46,A5
(PwAr) 50·DATA·C3,08,A5,DD,21
```

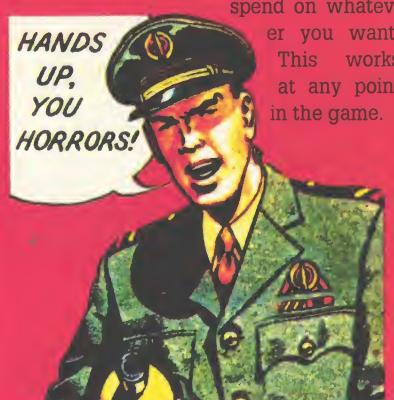


### Multiface pokes for Tape Thunderbirds

Address	Poke	Effect
5E48	A7	level 1
5FFC	A7	level 2
57C6	A7	level 3
5746	A7	level 4

## Dan Dare 3

*Dan Dare 3* the latest offering from Virgin has been looked at by Stephen Troup of Kings Lynn: Go to the Store and use up all of your ammo, you then get 4,000 credits to spend on whatever you want. This works at any point in the game.



## Rastan

The game with 255 levels gets 255 lives, or however many you want. The Hit Squad's *Rastan* tape falls to the cunning cleverness of the Rastanman, Dunstable's own Andy Price.

## Thunderbirds

This poke for tape version of *Thunderbirds* by Stephen Troup of Kings Lynn, gives you infinite

time. Your part of the deal is to select which level you are going to load, and then delete the lines which you don't need (not too difficult is it?) Just as a further bit of help, the passwords are:

Level 2) RECOVERY : Level 3) ALOYSIUS :  
Level 4) ANDERSON

```
(OgAq) 10·REM·Thunderbirds
(FnAr) 20·REM·Infinite·Time
(NiAr) 30·MODE·1:OPENOUT"D"
(JiAo) 40·MEMORY·&1000
(JvAn) 50·CLOSEOUT
(JvAo) 60·LOAD"!.",&1100
(LtAp) 70·FOR·a=&B0·TO·&A2
(ClAv) 80·READ·b$::b=VAL("&"&b$)
(JqAm) 90·POKE·a,b
(IxAk) 100·NEXT·a
(JiAo) 110·CALL·&80
(IrBj) 120·DATA·01,FE,01,21,00,11,11,00
(NtAx) 130·DATA·01,ED,B0,3E,CD,21,99,00
(ATu) 140·DATA·32,35,02,22,36,02,C3,00
(BiAp) 150·DATA·01,3E,A7
(BwAt) 160·REM·Pokes·only·select·one
(DoAq) 170·REM·Level·One
```

```
(InAp) 180·DATA·32,48,5E
(JrAp) 190·REM·Level
    ·Two
(ApAp) 200·DATA·32,FC,5F
(FnAr) 210·REM·Level·Three
(CtAq) 220·DATA·32,C6,57
(HnAp) 230·REM·Level·Four
(LmAp) 240·DATA·32,46,57
(DvAt) 250·REM·Leave·next·line
(NtAq) 260·DATA·01,82,F7,C9
```

Address = 2C1D Poke = Number

## Continental Circus

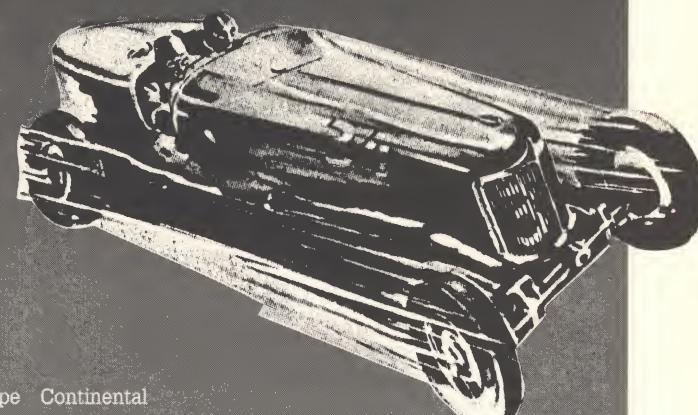
Ok! so do you remember this? Some time ago we did the disk version of the same cheat. Then the month after, you were supposed to get this tape version for *Continental Circus*, but for some reason Rod cut it out! (he's a bit like that!).

Anyway, undeterred, here it is again – If he cuts it out this time you'll never know, but more importantly, will you care?

```
(Cxq) 1·'·Continental·Circus
(ChAn) 2·'·Tape·Poke
(FrAs) 3·'·Infinite·Continues
(FtAj) 4·'
(CmAt) 10·DATA·21,16,bd,36,c3,23
(ChAt) 20·DATA·36,0e,23,36,be,c3
(JqAr) 30·DATA·0a,3b,21,17,be,22
(EuAu) 40·DATA·26,a4,c3,10,a4,dd
(MhAu) 50·DATA·21,04,a8,11,8f,00
(DmAu) 60·DATA·ed,if,a6,21,2a,be
```

- Multiface poke for Tape *Continental Circus*

Address = 2763 Poke = 00



## Satan

Stuck in the spectral caverns of Dinamic's *Satan*? Find your way out with the password to level 2 – 01020304.



## Ghouls 'n' Ghosts

Carl (Ebenezer – we've already done that!) Surry of Barnet has provided a little tip for *Ghouls 'n' Ghosts*: On the first screen, if you go to the extreme left and jump in the air, a secret chest will appear. (Not Maria Whittaker's, by the way – that never was much of a secret!)

from the side. This is more important later when they start chucking spells at you.

- In big rooms, where there are 2 or more monsters, make sure that you don't get cornered, and fight while retreating. If things get too hot then get out, the way you came in preferably, and lock the door behind you, then go to sleep. Try to save the game before entering these areas as they tend to be a bit dodgy.
- Before going to sleep, make sure it is not in a cul-de-sac (a corridor with no room at the end) as it may turn out to be a DEAD end when you are discovered by a monster and are trapped!
- Potions found have the following effect:

Moonelix – Spell points  
Dragon Broth – Vitality  
Snake Slime – Hit points  
Brimstone ale – The lot

- Make sure you don't leave a section until you have done everything there is to do.

## MULTIFACE POKEs

Cloistered again, Carl (Ebenezer) Surry of Barnet thumbed through his hoard of Multiface pokes. "Six billion and seven, and eight...", the midnight clock disturbed his count. "Bah! Humbug!" he muttered, "Christmas!". No sooner had the word fallen from his lips, than a mysterious chinking and clanking of chains echoed along the hallway and stopped dead outside his door. Carl watched in horror, as a ghostly arm reached through and grabbed a handful of the precious pokes...

NAME	ADDRESS	POKE	EFFECT
Bubble Ghost	(t) 82A4	00	Inf. bubbles
Hydrofool	(t) 7575	C3	Stops rust
Uridium +	(t) 1FC2	00	Inf. lives
	0962	00	no homing
	0963	00	missiles..
	0964	00	all 3 pokes
Tiger road	(d) 56F1	00	Inf. lives
Molecule man	(t) 9EBD	00	Inf. time
Gryzor	(d) 1526	A7	Inf. lives
Antiriad	(t) S749	00	Gives boots
	64F4	00	Gives guns
Frohibition	(t) 0FB1	B7	Inf. hide time
	0B69	B7	Inf. lives
	198E	00	No shooting back
Operation Hanoi	(t) 8AB3	A7	Inf. ammo
	8ACF	A7	Inf. grenades
	8F0E	A7	Inf. lives
TLL	(t) 917A	00	Inf. lives
	A6A2	A7	Inf. fuel
	903B	00	Inf. time..
	903C	180	do both
	A8C8	00	Inf. bombs..
	A89B	00	do both
Renegade	(t) 0FBB	FF	Stay on platform
Renegade	(d) 0FE1	FF	Stay on platform
Flying Shark	(t) 4FA6	00	Inf. smart bombs
Dan Dare 2	(t) 7B91	A7	Inf. lives
Renegade 3	(t) 4DDF	C9	Inf. lives
Highway Encounter	(t) 0B77	03	Freeze aliens
Ranarama	(t) 798C	00	Slows energy
Ramparts	(t) 6883	A7	Inf. energy (p1)
	68E1	A7	Inf. energy (p2)
Sabre Wulf	(t) A570	A7	Inf. lives
Black Tiger	(d) 5612	A7	Inf. lives
T Bird	(t) 1433	A7	Inf. smart bombs
	15AB	A7	Inf. lives
Fairlight	(t) 7D2F	00	Inf. life
Butcher Hill	(t) 115D	A7	Inf. lives
	11FD	A7	Inf. lives
Spike Harold	(t) 9C33	A7	Inf. lives
Laser Squad	(d) 4652	00	Inf. money

## THE MULTIFACE WAY

The (t)s and (d)s before the address indicate whether the poke was written for a tape or disk game (they might work on both, it's worth a try). Just in case you don't already know how to put in these BLACK BOX POKEs, here are the steps to success:

- a) Load the game as normal.
- b) Press the RED button on the Multiface.
- c) Press "T" for tool.

- d) Press "\*" to make sure you select the code.
- e) Press "H" for HEXADECIMAL input.
- f) Press "SPACE" for input.
- g) Type in the ADDRESS (4 characters ie. 3A7C)
- h) Type in the POKE (2 characters ie. A7)
- i) Press "RETURN"
- j) If there is more than one poke goto (f)
- k) Press "ESC" back to the menu.

## Snoopy

Way down in Gibraltar (The gateway to Atlantis), Xavier Cerisola has been working on the solution to

*Snoopy*. I may come and visit you for as month or two, Xavier, I've been on the lookout for a friend with a deckchair in the sun...

First eat the FOOD then get the TYPEWRITER from the doghouse (kennel), and write a LETTER, give it to Charlie Brown. Get the COOKIE JAR and eat the cookies. Catch the FROG in the COOKIE JAR. Go to Lucy and scare her by letting the FROG loose. Pick up the RUBBER RING, which she drops, and put it beside the tree with a KITE in. Get the BALL and kick it into the water. Go and get the CATAPULT and then return to the water. Jump onto the BARREL then quickly onto the BUCKET (next screen). Jump on to the BALL and keep jump pressed until you reach land. Burst the BALLOON with the CATAPULT. Get the PUMP and go to the tree with the KITE in. Pump up the RUBBER RING and bounce on it. Get the KITE and give it to Charlie Brown, who drops a KEY. Pick up the KEY and open the SCHOOL LOCKERS. Pick up the BLANKET and give it to Linus. The game is complete.

## Ikari Warriors

David Hayes Of Neilston has been good enough to tell us that if you redefine the keys on *Ikari Warriors* so that both men are controlled by the same joystick, then choose a two-player game, move one man to the edge of the screen and then move the other until they are joined together, you can now play the game with double the firepower and double the ammo. That's what I call a really clever cheat, Dave.

## Eliminator

James Durrant from Gloucester has supplied the level codes for *Eliminator*:

Level 2: BLOSP Level 3: ASDEL Level 4: XPLRT Level 5: GLPWM Level 6: EOCKQ Level 7: LFPRT Level 8: WMCPY Level 9: — Level 10: ZPEML Level 11: ELVPO Level 12 CPEMF Level 13: APXYQ Level 14 PWVAR



Every poke, map, hint and solution from the last twelve issues of *Amstrad Action*...

## CHEAT MODE INDEX

After the war	Password	AA60	Ninja mass (quattro)	Password	AA64	Blade warrior	(t) mult	AA58	Operation thunderbolt	(t) lives
Agent x 2	Password	AA53	Nuclear helst	Keypress	AA59	Blade warrior	(t) mult	AA61	Operation gunship	(t) mult
Airborne ranger	Tape Poke	AA58	Olli and lissa 3	Tape Poke	AA57	Bloodwych	(d) mult	AA63	Operation thunderbolt	(t) lives
Airborne ranger	Disk Poke	AA59	One man & his droid	Password	AA53	Bobby baring	(t) helps	AA58	Operation handi	(t) mult
Altered beast	Playing Tip	AA57	Operation gunship	Tape Poke	AA52	Bombfusion	(t) mult	AA58	Outrun	(t) time
Arcade flight sim'	(Ottrro) Tp Pk	AA64	Op golf (lightgun)	Keypress	AA56	Bombjack	(t) mult	AA57	Palitron	(t) energ
Army moves	Password	AA53	Op thunderbolt	Playing Tip	AA64	Bombjack 2	(t) lives	AA57	Parabola	(t) lives
			P47 thunderbolt	Keypress	AA56	Brian bloodaxe	(t) lives	AA58	Periscope up	(t) mult
				Tape Poke	AA63	Bronx street cop	(t) mult	AA60	Plasmator	(t) damag
						Bubble bobble	(d) lives	AA58	Powerdrift	(t) credi
Atv simulator	Tape Poke	AA62	Pipe mania	Password	AA59	Bubble bobble	(t) lives	AA58	Pro boxing sim	(t) lives
Batman 3d	Disk Poke	AA59	Pipe mania	Keypress	AA59	Bubble ghost	(t) bubb	AA64	Pro power boat sim	(t) mult
Batman the movie	Keypress	AA53	Pirates	Playing Tip	AA59	Buggy boy	(t) time	AA55	Prohibition	(t) lives
Batman the movie	Map	AA53	Pirates	Playing Tip	AA63	Buggy boy	(t) time	AA56	Prohibition	(t) mult
Batman the movie	Disk Poke	AA57	Powerdrift	Tape Poke	AA61	Buggy boy	(t) time	AA56	Psycho hopper	(t) mult
Batman caped crus	Solution	AA61	Pro boxing sim	Tape Poke	AA61	Buggy boy	(t) time	AA61	Psycho pigs uxb	(-) lives
Bedlam	Keypress	AA57	Pro power boat sim	Tape Poke	AA62	Butcher hill	(t) lives	AA64	Quattro power pack	(t) mult
Beyond the ice palace	Tape Poke	AA56	Pro power boat sim	Keypress	AA63	Chase hq	(d) mult	AA55	R-type	(-) credi
Black tiger	Disk Poke	AA60	Psycho hopper	Tape Poke	AA59	Chase hq	(t) mult	AA55	R-type	(-) credi
Blade warrior	Tape Poke	AA61	Quattro power pack	Tape Poke	AA62	Chase hq	(d) mult	AA56	R-type	(-) mult
Bloodwych	Playing Tip	AA62	Quattro combat pack	Tape Poke	AA64	Chase hq	(t) mult	AA56	R-type	(-) mult
Bloodwych	Playing Tip	AA64	Rainbow islands	Playing Tip	AA61	Chicago 30s	(t) lives	AA60	Race against time	(t) time
Bmx freestyle	Keypress	AA62	Rambo 3	Tape Poke	AA60	Cholo	(t) invul	AA61	Rainbow islands	(d) resta
Bombfusion	Tape Poke	AA58	Rasta	Playing Tip	AA63	Cobra	(t) shots	AA57	Rambo 3	(t) cont
Bounty hunter	Keypress	AA59	Rasta	Tape Poke	AA64	Combat school	(t) timer	AA55	Ramps	(t) energ
Bubble ghost	Playing Tip	AA63	Real ghostbusters	Keypress	AA57	Combat school	(t) timer	AA56	Ranarama	(t) energ
Buggy boy	Tape Poke	AA61	Remegade 3	Keypress	AA52	Continental circus	(d) conti	AA57	Rasputin	(t) health
Cabal	Tape Poke	AA53	Rex	Tape Poke	AA62	Continental circus	(t) cont	AA64	Rastan	(t) lives
Castle master	Disk Poke	AA59	Rick dangerous 2	Tape Poke	AA62	Count duckula	(t) enemy	AA60	Rastan	(t) lives
Castle master	Solution	AA59	Ricochet	Keypress	AA63	Crazy cars	(t) time	AA58	Red heat	(t) mult
Chase hq	Keypress	AA56	Rogue	Tape Poke	AA61	Critical mass	(t) craft	AA60	Renegade	(d) pltn
Cholo	Password	AA53	Saigon combat unit	Tape Poke	AA55	Daley thompson	(t) lives	AA58	Renegade	(t) pltn
Classic arcadia	Tape Poke	AA56	Saigon combat unit	Tape Poke	AA55	Dan dare	(t) lives	AA61	Renegade 3	(t) lives
Continental circus	Disk Poke	AA57	Sas comb sim (Ottrro)	Tape Poke	AA64	Dan dare 3	(t) mult	AA62	Rex	(t) lives
Continental circus	Tape Poke	AA64	Satan	Password	AA64	Dan dare 2	(t) lives	AA64	Rick dangerous	(t) mult
Count duckula	Tape Poke	AA60	Shinobi (AAdemo)	Tape Poke	AA52	Death Stalker (Ottrro)	(t) mult	AA64	Ricochet	(t) lives
Cybernoid	Keypress	AA55	Snoopy	Tape Poke	AA64	Defenders of the earth	(t) lives	AA63	Roadblasters	(t) mult
Cybernoid 2	Keypress	AA55	Snowball in hell	Tape Poke	AA63	Defektor	(t) mult	AA57	Rogue	(t) energ
Dan dare 3	Playing Tip	AA64	Soldier of light	Tape Poke	AA59	Desolator	(t) lives	AA59	Rolling thunder	(t) mult
Death Stalker	(Ottrro) Tp Pk	AA64	Space harrier	Tape Poke	AA56	Dizzy 3	(t) lives	AA63	Sabre wulf	(t) lives
Death Stalker	Map	AA64	Space harrier 2	Disk Poke	AA61	Doodiebug	(t) lives	AA58	Sacred armour of ant	(t) mult
Defenders of the earth	Tape Poke	AA63	Space rider jet pack	Tape Poke	AA63	Double dragon	(t) lives	AA61	Sacred armour of ant	(t) mult
Dizzy 3	Solution	AA54	Spindilzy	Keypress	AA60	Dragons lair	(t) lives	AA59	Shadow skimmer	(t) lives
Dizzy 3	Map	AA58	Spooky castle	Tape Poke	AA64	Dragons lair	(d) lives	AA64	Shinobi	(t) lives
Dizzy 3	Tape Poke	AA63	Starfox	Password	AA64	Druid	(t) energ	AA61	Sidearms	(t) lives
Double dragon	Tape Poke	AA61	Stormlord	Keypress	AA55	Dynamite dux	(d) credi	AA58	Scooby doo	(t) ghost
Dragon spirit	Tape Poke	AA57	Strider	Keypress	AA59	Dynasty wars	(d) energ	AA64	Scooby doo	(t

# HELPLINE

Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: Helpline, Amstrad Action, Beaufort Court, 30 Monmouth Street, Bath, Avon BA1 2AP. Please write on a postcard or the back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'load-sagames').

If you want help contact the appropriate Helpliner - not us. By post include a self-addressed, stamped envelope for the reply - or you won't get one. And phone only in decent hours!

Piracy is not welcome: don't try it, you'll get booted off. Keep it legal. And if you receive SAE's, for heaven's sake return them with some acknowledgement. Finally, if you want to come off Helpline just write in and say so.

I have Operation Thunderbolt and Blasteroids on disk. I want to swap for The Animator and Laser Squad Expansion Kit on disk. All mine are originals, so must yours be. Also help needed on translating code in Catch 23.

Simon Warford, 134 Draper House, Hampton St, London SE1 6SY

Selling games. Also wanted, pokes, tips and maps. Keypresses and cheats. Send SAE for list.

Mark Collins, 124 Shegoneill Ave, Belfast BT15 3JR Northern Ireland

Will anyone swap Turrican for Shadow Warriors and Paper Boy? Or Batman the Movie for Operation Wolf? Only in England please.

Paul Dugdale, 80 Charter Ave, Newbury Park, Ilford, Essex IG2 7AD

I have got Italia 90 and Man Utd on tape (original). Anyone want to swap them for new games? Also I've got loads of mags to sell. AA 20-61, CWTA. ACU. Send SAE for list of cheap prices. I need to get rid of them.

Yong Pang, 12 Rheingold Way, Wallington, Surrey SM6 9NA

I own a CPC 464 computer. Help given on all games. Pen-pals wanted from anywhere aged 14-19. Male or Female. All letters answered!

Karen Orr, 128 Falside Cres, Falside, Bathgate, West Lothian, Scotland EH48 2DP

I have a CPC 464. I need help on Ninja Warriors and Pacland. Send SAE and I will give three pokes and P47 is one of them.

Peter Glikofridis, 8 Windsor Ave, Clacton on Sea, Essex, CO15 2AQ

Help wanted! I can't load the poke for Cauldron I from the 85 86 Book. Help also wanted on Grange Hill.

Christine McFarlane, 11 Nasmyth Rd, Barton, Eccles M30 7AP tel 061 789 2788

Has anyone got Psycho Pigs UXB (don't laugh) on disk to sell or to swap for Desolator, Mega Apocalypse or Bards Tale (all on disk)? Also, penpal wanted 11-14. male or female. Must have 6128 disk.

Stephen Daultrey, 8 Queens Ave, Woodford Green, Essex IG8 0JE

Wanted: PD software on tape for 464, GAC + home-grown software. All letters answered! Hi Jan-Fei.

Iain McKinnon, 37 Loch Laidon St, Sandyhills, Glasgow G32 9HR

Wanted: Battle Of Britain, Waterloo, Vulcan, Soccer 7, Ace Of Aces, Johnny Reb 2 (for tape). I will swap for games like Dizzy 1 and 3, RoboCop and lots more. Please send list of the above games you have to swap and SAE to:

Declan Heerey, 1 Rivet House, Coopers Rd, London SE1 5HT

Help offered on all aspects of BASIC and assembly language programming. Don't forget the SAE!! Sean McManus 226 Chertsey Rise, Stevenage, Herts SG2 9JQ

Help needed. We have an SSA 1 Amstrad Speech Synthesizer and Amplifier with no instructions. When the tape is loaded a face comes on the screen and says something we can't understand. Then the word ready appears. We don't know what to do! Is there any chance of anyone helping is out?

Mr G K Bradbury, 40 Ashmole Place, Blackbird Leys, Oxford OX4 5TN

Has anybody got Italy 1990 (cassette only original) and AA45 for Turbo Outrun and Gazza's Super Soccer (both these games are cassette originals). Help needed on Bloodwych, and has anybody got key-press cheat on Dizzy 1? Telephone only for help.

Trevor Farnham, 92 Irwell Birch Green Skelmersdale WN8 6JZ Telephone 0695 32291

Calling all Helpliners. Does anybody want a pen pal to a person with a 464 and disk drive, who runs a PD library (Demon PD)? If they do, or if they want some PD or they've got any PD to contribute, write to the address below...

David Long, 47 Hilton Ave, Hall Green, Birmingham B28 0PE

**Helpline is for readers wanting help, tips or pokes, or offering any of the above. No money is to change hands, OK? This page is for free help only. If you send in an entry asking for money for your services you're wasting your time and a stamp - it'll be straight in the bin. On the other hand, send in a cheque for £5 and you could go in Small Ads...**

Does anyone want to swap Batman the Movie for four of these games. Sultan's Maze, Oh Mummy, Masterchess, Grand Prix, Grand Prix Sim, Helicopter, Grand Prix Driver, Bridge It, Chiller, Batman the Caped Crusader. If interested write to:

J Rowe, 18 Lockington Crescent, Stowmarket, Suffolk, IP14 1DB

Female penpal wanted 12-14 to lend games and swap cheats, pokes. I own a CPC 464. Who'll write to a bored 13 year old? All letters get a reply!

Jimmy Brax, 28 Saffron Road, Bracknell, Berkshire, RG12 4BS

If anyone has got Stunt Car Racer or Fighter Bomber on 464 tape to sell for no more than £5, I would be very grateful. I am also offering to swap any one of these, for these games: Crackdown, E-Motion, Klax, Cholo, Ghostbusters II, Shinobi, Fernandez must Die, and lots more.

Khalid Murad, 26 Wardown Crescent, Luton, Beds LU2 7JS

I have got a game called Night Rider, but I am having trouble on it. At the end I can't get the Bismarck, I can get the U-boats, E-boats, planes and mines but I can't get the Bismarck. Is there anyone who could show me how to bomb the Bismarck please?

Amit Ruparelia, 54 Castlcombe Drive, Wimbledon, LONDON, SW19

Help desperately needed on Rainbow Islands, Op Wolf, Forgotten Worlds, Ghosts 'n' Goblins and Black Tiger to exchange for pokes and cheats for RoboCop, Gryzor, Dizzy, Myth and Untouchables (all on tape). Also AA's needed - 46, 51, 54, 55, 56.

David Woodward, 85 Drayton Rd, Sutton Courtenay, Abingdon, Oxon OX14 4HB

I need some instructions for non-movement actions for Renegade, e.g. flying kicks, punches, floor punches etc. Also wanted: maps for Short Circuit and Price of Magik, pokes for Super Robin Hood and Dizzy.

Ben Sizer, 6 Greave House Terrace, Lepton, Huddersfield, West Yorkshire HD8 0DQ

Could anyone give me a cheat (not a Multiface) for Ghostbusters 2 (level 2) and for Batman the Movie (level 1)? Also, pen pal wanted age 10 to 12. Has to have a CPC 6128 and disk drive.

David Searle, 20 Shalloch Park, Doonfoot, Ayr, Scotland KA7 4HL

Help wanted on Type-In AA28, Streamer. I keep getting Syntax Error in Line 820. Can you help?

Mr J M Pearson, 7 Muschamp Tr, Warsop, Notts NG20 0NL telephone 0623 846017

Help urgently needed with AMX Stop Press. Extra fonts and clip art pages required. Will provide disks and postage.

Simon Pearce, Chapel Rise, High St, Swineshead, Boston, Lincs PE20 3LH

I can offer help with BASIC. All SAEs answered.

Nick Allen, 7 Hawkwood Ave, Frimley, Camberley, Surrey GU16 5LH

Desperately Wanted: New Zealand Story on tape. Will swap for Wild Streets and Airwolf or Indiana Jones and the Last Crusade and Airwolf. All on tape. Also have a lot of cheats. If you want some please send an SAE.

Jonathan Portlock, 5 Westville, Hebden Bridge Rd, Oxenholme, Keighley, West Yorkshire BD22 9JS. Tel 0535 44995

Has anybody got Hacker and Hacker 2 to swap for RoboCop or Batman the Movie? Also, has anybody got a poke anywhere for Bactron or Munsters?

S Hurst, 8 Restormel Rd, Barbican, East Looe, Looe, Cornwall PL13 1EJ Telephone 05036 4472

Help wanted on Elite - tape POKE would be nice. I can HELP with Lords of Chaos and Bloodwych. Penpal wanted any age to SWAP GAMES and pokes tips.

Chris Palmer, 257 The Hides, Harlow, Essex, CM2Q 3QU.

Desperately wanted, Issues 49, 50 and 51 of AA will swap for Thunderbirds or February to October issues of ACU. Also swap Heroes of The Lance for Bloodwych, Tolkien Trilogy or Bards Tale (on TAPE PLEASE). I've also got Adeptus Titanicus, Blood Bowl, D+D, Star Trek + more to swap for Multiface 2. (Remember to State Your Address).

Contact:

J Boniface, 119 Grinstead Lane, Lancing, Sussex, BN15 9DR

Hi there! I have Cyberball and would like to swap for Double Dragon 1 or 2. 464 tape only. Are you interested?

Daniel Ware, 33 Salisbury Rd, Grays, Essex RM17 5DG

HELP! Need some kind soul to sell me Boulderdash Construction Kit on disk. Just write to me, sending details, or give me a nice happy phone call on (0302) 323266.

PS Please can I have a witty comment from Rod in brackets ?????? (daft, ranting clot - ed)

Mark Berbezier, 47 Lakeen Road, Intake, Doncaster, South Yorkshire, DN2 5HB.

Help! Has anyone got Rick Dangerous 1 or 2 to swap for Ghostbusters 2 and Laser Squad (tape please).

Also does anyone have the keypress cheat for New Zealand Story? (From AA55)

Tobi Forsdyke, 14 Dagmar Rd, Stroud Green, London N4 4PB

Penpal wanted, 16 years old, 6128 owner to exchange hints, tips, maps, pokes and Public Domain Software help on lots of games. Need help with machine code.

Brett Ironmonger, 1/32 Kenneth Hopper Place, Whangaparaoa, New Zealand.

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# A AFTERTHOUGHT

If this page was a horse you'd shoot it. Spectravideo waggler winners ahoy!

We've had some wonderfully witty answers to last month's Chrimbo pressie list compo, but unfortunately we couldn't print all of them... c'mon, we did ask you to keep them clean. Here, however, are those that we could print...

**Garry Smith of Carlisle** wants:  
A Commodore Amiga (oh, sure, very funny...)  
That woman out of Baywatch complete with double-size bed  
12 condoms and a jar of...  
OK, that's enough. See what we mean?

**Stephen Malpas of Bristol** wants:  
Ultra-fabby Spectravideo joystick  
Ton of lard (eh?)  
BBC1's spinning globe  
Framed picture of Denis Thatcher  
A caterpillar's brain (*got one, haven't you?*)  
Some custard to go with it  
Teenage Mutant Ninja Parsnip  
Toilet flush (on CD please)  
Bob Holness

**Dave Stokes of Roslin** wants:  
A real, full-size Teenage Mutant Ninja Turtle to scare the living daylights out of my son so that I will no longer have to share my home with a complete set of Turtle merchandising (oooor, a bit a politics there...)  
Two silicon disks; I think I can swing this one

Small slide of Rod's home-made wine  
Well done, Stephen, but we think you forgot the straightjacket

as the wife thinks she can use them to improve her figure (it's about all you will swing if she spots this, pal)  
A porcupine quill, otherwise this competition will be completely pointless (er, like that joke?)

A laptop computer (organic)  
Dave wanted a cowboy outfit, but we can't print which outfit because despite what he says, it is libelous. We'll leave you guessing over that one...

Congratulations, you lot! Your ultra-waggy fabbler, er, ultra-faggy wobbler... um, that is joysticks are on their way.

## CAPTION COMPO WINNER

Well, we had one or two, er, unusual entries for this one, but the winner has got to be the one we received from **James Edwards of Blackburn:**

• "The wife! Quick, hide in here..."

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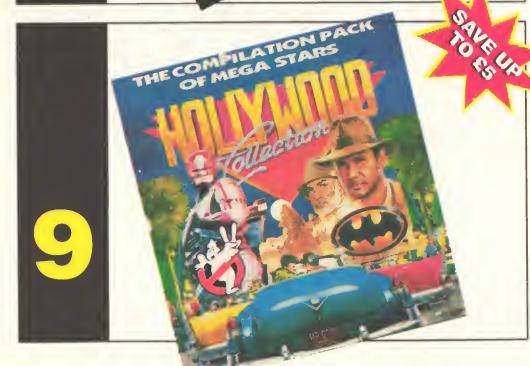
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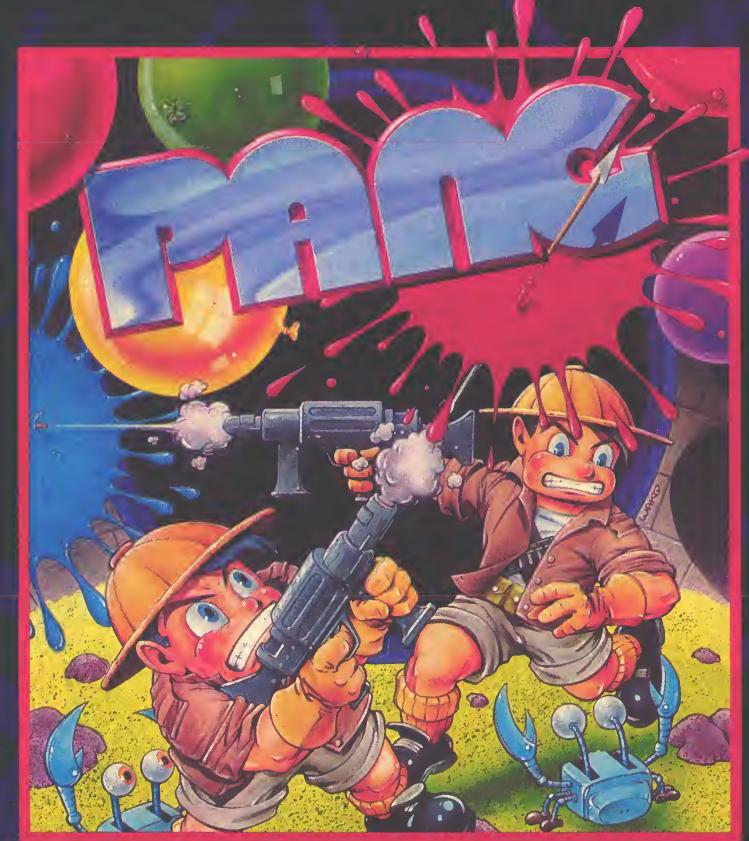
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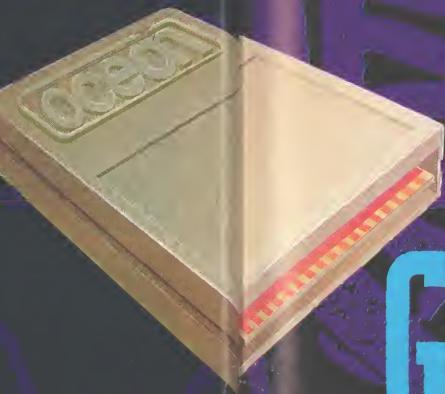


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